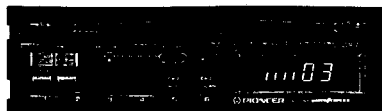


Service Manual

 **PIONEER®**
The future of sound and vision.

• DEH-750/UC



ORDER NO.
CRT1295

HIGH-POWER COMPACT DISC PLAYER WITH FM/AM TUNER

DEH-750

UC, ES

DEH-650 UC

DEH-620 US

DEH-80 US

COMPACT
disc
DIGITAL AUDIO

HIGH-POWER COMPACT DISC PLAYER WITH FM/MW/LW TUNER

DEH-700SDK WG

DEH-700 EW

DEH-600 EW

Note:

- See the separate manual CX-173 (CRT1161) for the CD mechanism description.
- Refer to the service manual CDX-M100 (CRT1136) for finding circuit description which are not shown in this manual.

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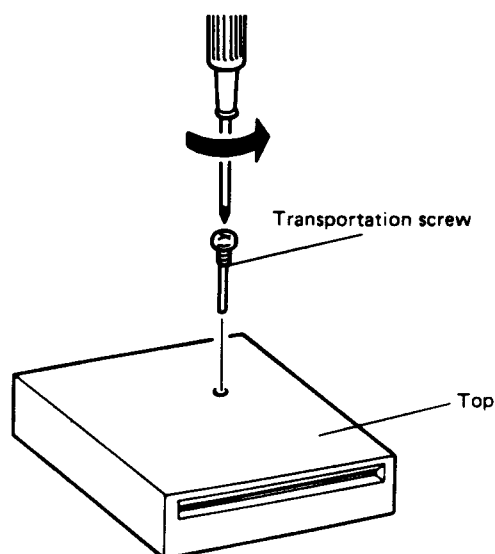
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FK MAY 1990 Printed in Japan

• CD Player Service Precautions

1. Since these screws protect the mechanism during transport, be sure to affix it when it is transported for repair, etc.
2. For pickup unit (CGY1015) handling, please refer to "Disassembly" (Fig. 4) During replacement, handling precautions shall be taken to prevent an electrostatic discharge (protection by a short pin).
3. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.



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SAFETY INFORMATION (UC, US MODEL)

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

SAFETY INFORMATION (EW MODEL)

1. Safety Precautions for those who Service this Unit.

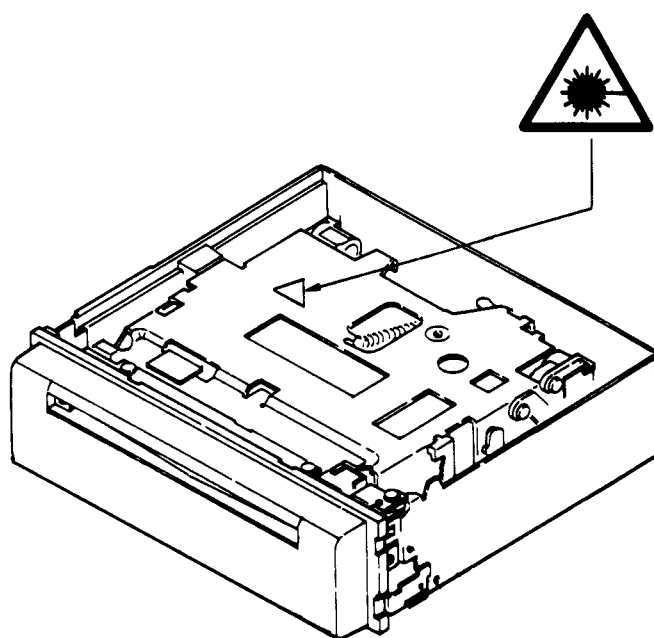
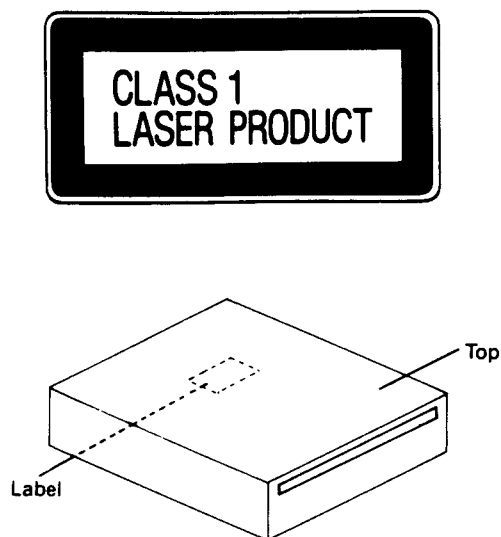
- Follow the adjustment steps (see pages 13 through 34) in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

- During repair or tests, minimum distance of 13cm from the focus lens must be kept.
- During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player.

3. The triangular label is attached to the mechanism unit plate unit.



4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 780 nanometers

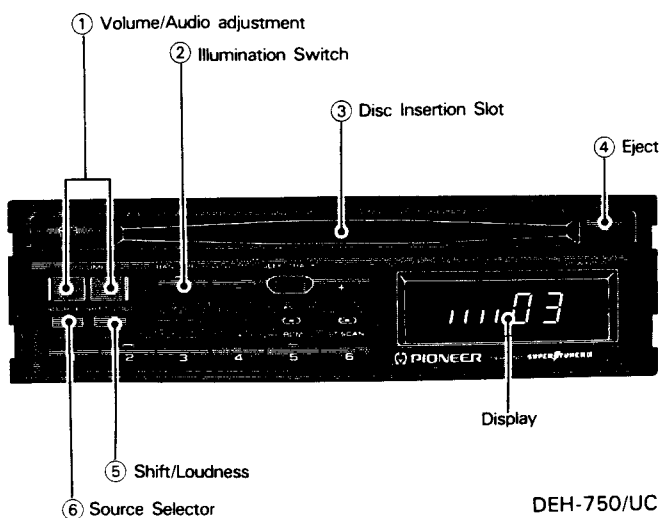
Radiant power = 69.7 microwatts

(Through a circular aperture stop having a diameter of 80 millimeters)

0.55 microwatts

(Through a circular aperture stop having a diameter of 7 millimeters)

1. ADJUSTING VOLUME AND TONE



Switching Power On

Tuner

Press button ⑥ to switch the tuner power on. Press button ⑥ again to switch the power off.

CD Player

When a disc is inserted half-way into the disc insertion slot ③ with its label side upward, the disc is automatically loaded and played.

To remove the disc, push button ④.

- If the car's ignition switch is turned "OFF" with the front panel remaining on the main body, the buzzer will be heard for a few seconds in order to warn you that the panel must be removed for the purpose of preventing theft when leaving the car.

Changing the source

To change the source, push button ⑥ with the disc inserted in the slot. At each press of the button, the source changes as follows: CD Player-Tuner-OFF

Note that if you press button ⑥ to halt playing, the disc resumes playing with about the remainder when set to start again.

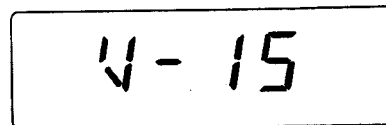
Adjusting Audio

When the display indicates disc or tuner, press button ① to adjust the volume. Each press of button ⑤ changes the display and the function of button ① as follows:

Volume→Fader→Bass→Treble→Balance

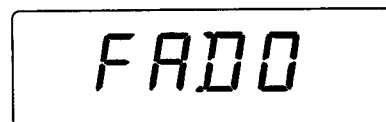
Adjusting Volume

Pressing the (+) side of button ① increases the volume, while the (-) side decreases it.



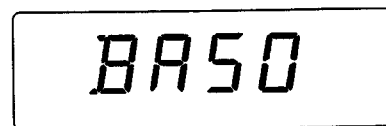
Adjusting the Fader

This function controls the balance between the front and rear speakers of a 4-speaker system. Pressing the (+) side of button ① shifts the balance to the front speakers, while the (-) side shifts it to the rear speakers. For 2-speaker systems, set FAD 0.



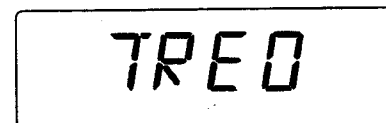
Adjusting Bass

Pressing the (+) side of button ① increases bass, while the (-) side decreases bass.



Adjusting Treble

Pressing the (+) side of button ① increases treble, while the (-) side decreases treble.



Adjusting Balance

Pressing the (-) side of button ① shifts the balance to the left speaker, while the (+) side shifts it to the right speaker.



- When you're adjusting fader, bass, treble, or balance settings, the indicator will stop at the center setting. About 5 seconds after adjustment has been made, the display returns to its previous state.

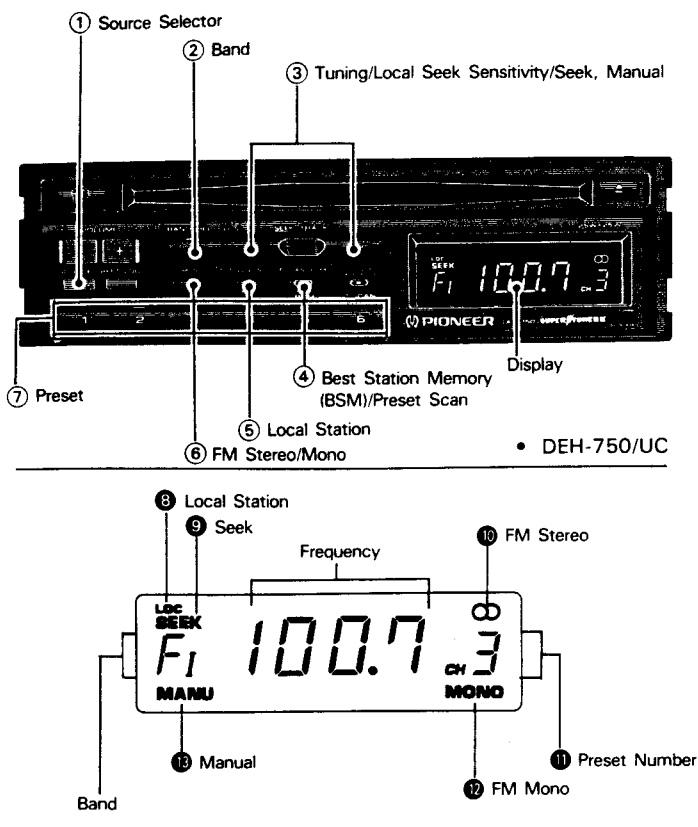
Using the Loudness Function

Press button ⑤ for about two seconds and the "LOUD" indication will appear on the display. This loudness function lets you enhance both high and low frequencies to give a more natural sound at low volumes. To cancel this function, press button ⑤ again for about two seconds.

Switching Illumination Colour

You can select either green or amber for the switch illumination colour. To switch the colour, hold down button ② for two seconds.

2. USING THE RADIO



1 Press Button ① to switch the radio power on.

2 Press Button ② to select a band.

$F_I \rightarrow F_{II} \rightarrow F_{III} \rightarrow A$
(FM1) (FM2) (FM3) (AM)

3 Use seek tuning to tune in a frequency.

Confirm that the SEEK indicator ⑨ is shown on the display (if not, press the (+) and (-) sides of button ③ at the same time). Press the (+) side of button ③ to automatically tune in the next higher receivable frequency, and the (-) side for a lower frequency.

4 Adjust volume and tone (see page 5).

5 Assign the tuned frequency to one of the Buttons in Bank ⑦ (preset memory).

Press and hold down one of the buttons in Bank ⑦ for at least two seconds. The frequency is assigned to the selected button when the preset number ● stops flashing on the display. Up to 18 FM stations (6 each for FM1, FM2 and FM3), and six AM stations can be assigned to the preset memory buttons in Bank ⑦.

6 Once a frequency is assigned to a Button in Bank ⑦, you just need to press that Button to tune it in.

This also causes the number of the button pressed to appear at Position ● on the display.

Preset Scan Tuning

This function lets you automatically monitor the stations assigned to the preset buttons.

1. Press the button ④, and the preset number ● flash.

Each station assigned to the buttons in Bank ⑦ will be automatically tuned in for about eight seconds.

2. When you hear a station that you like, press button ④ again to cancel preset scan tuning and remain at that station.

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to the buttons in Bank ⑦, from strongest to weakest. It comes in handy when trying to find local stations while driving.

1. Press button ② and select a band.

2. Hold down button ④. After about two seconds, a "beep" will sound to signal that the BSM search has started. At this time, " - - - " will flash on the display.



3. The frequency display will return once BSM search is complete, and frequencies are assigned to buttons 1 through 6 in Bank ⑦.

- At the end of the BSM search, the displayed frequency is that assigned to button ① of Bank ⑦.

- If there are fewer than six strong stations in the area, some of the buttons in Bank ⑦ will not be assigned frequencies, so they will retain any frequencies assigned to them previously.

- BSM search may take as long as 30 seconds in areas where there are few strong stations.

- You can cancel BSM search by pressing button ④ again.

Manual Tuning

Use manual tuning when stations are too weak to be picked up by seek tuning.

1. Press both (+) and (-) sides of button ③ simultaneously to illuminate "MANU" ●.

2. Each press of the (+) side of button ③ increases the frequency in 0.2 MHz steps in the FM band, 10 kHz in the AM band. Pressing the (-) side of button ③ decreases the frequency. Holding down either side of button ③ changes the frequency at high speed.

Switching between FM Stereo and Mono

Generally, it is best to allow the "Super Tuner III" function to automatically set the optimum listening conditions. When there is a large amount of noise, you can press button ⑥ for clearer mono reception ("MONO" ● will appear on the display).

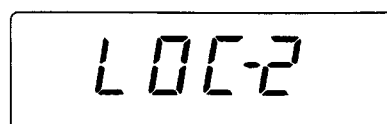
Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations. The local setting also has four seek tuning sensitivity levels for FM and two levels for AM to match local conditions.

Changing the Local Seek Sensitivity

1. Use button ② to select a band.

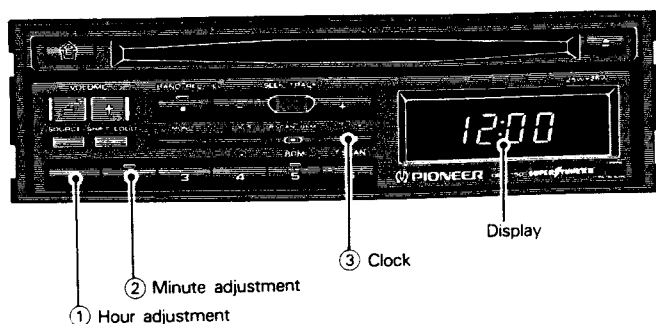
2. Hold down the button ⑤ for more than two seconds, and the display will show you the current local seek sensitivity for about five seconds.



(Example: LOC-2)

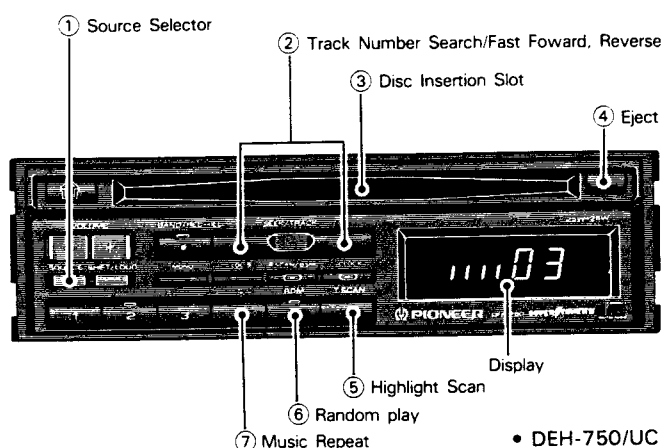
3. While the local seek sensitivity remains on the display, press the (+) side of button ③ to increase the sensitivity level, and the (-) side to decrease the level as shown below.
 FM: LOC-1 → LOC-2 → LOC-3 → LOC-4
 AM: LOC-1 → LOC-2
 The LOC-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations.
- The display of local seek sensitivity returns to the frequency when about five seconds have elapsed after the change of sensitivity.

3. USING THE CLOCK DISPLAY

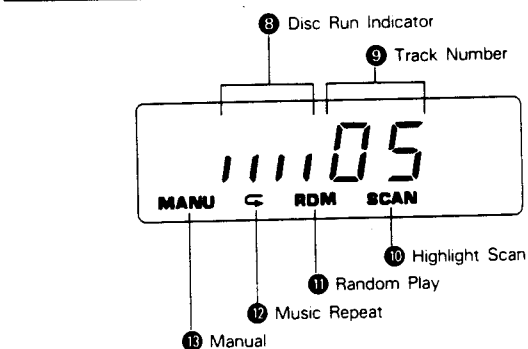


• DEH-750/UC

4. PLAYING COMPACT DISCS



• DEH-750/UC



Switching between Local and DX

Press button ⑤ to switch between Local and DX (distant) seek tuning. When "LOC" ⑤ is shown on the display, seek tuning is performed with the local seek sensitivity. Otherwise, seek tuning is performed with the DX seek sensitivity.

Displaying the Time

The clock is displayed while button ③ is depressed. Press button ③ again to turn off the clock display.

- The Time Display functions only when power is on.

Adjusting the Time

Adjusting the Hours

While holding down button ③, press button ① to adjust the hour setting of the clock. Each press of button ① advances the hour setting by one hour, and holding it down advances the setting at high speed.

Adjusting the Minutes

While holding down button ③, press button ② to adjust the minute setting of the clock. Each press of button ② advances the minute setting by one minute, and holding it down advances the setting at high speed.

- 1 When a disc is inserted half-way into the disc insertion slot ③ with its label side upward, the disc is automatically loaded and played.
 (Track number ⑨ and disc run ⑧ indications will appear on the display.)

- 2 Use track number search to select a track.

See that no "MANU" ⑬ illuminates on display. If it does, then turn it off by pressing the (+) and (-) sides of Button ② simultaneously. Press the (+) side of button ② to increase the number at position ⑨, or the (-) side to decrease the number. Holding either side of button ② down changes the track number at high speed.

- 3 Adjust volume and tone (see page 5)

- 4 To eject or change the disc, press Button ④.

If an ejected disc is pushed back into the slot, it will be loaded and played again.

Note:

- If a disc can only be inserted halfway, or if the disc does not play after being loaded, something may be wrong with the disc. Eject the disc by pressing button ④, and check it. If it is all right, insert it again.
- Insert the disc with its label (printed) side facing up. If the disc is inserted with the label side facing down, it will not play, and the recorded side may be damaged.
- When ④ is displayed, a disc is loaded. If another disc is inserted into the slot at this time, the discs may be damaged or the player may malfunction.
- Do not insert two discs into the slot at the same time. This may cause a malfunction.

Using Highlight Scan

Highlight Scan is designed to enable you to conveniently scan all pieces of music contained in the disc by playing 10 seconds each at your designated point of time after the start of the music. The starting time of play is set at one minute in factory. Therefore, the Highlight Scan begins one minute after the start unless you designate it otherwise.

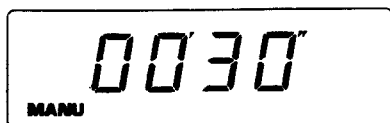
When you do not want to change the factory-set time:

1. Press Button ⑤, and "SCAN" ● will illuminate.
 2. The contained pieces of music will be played in sequence for 10 seconds each one minute after the beginning.
 3. Press Button ⑤ again when your selected piece comes, and it will continue to play. At this point, the Highlight Scan discontinues to operate.
- The previous function automatically resumes when a piece of music with which Highlight Scan began returns.

Changing the Starting Time of Highlight Scan

When you want to set the starting time of the Highlight Scan to 30 seconds:

1. Press Button ②, (+) and (–) sides simultaneously, and "MANU" ● will illuminate and time numerals will be displayed.
2. Keep pressing either (+) or (–) side of Button ② until the numerals reaches 30.



3. Hold down Button ⑤ for two or more seconds, and "SCAN" ● will illuminate and the Highlight Scan will begin 30 seconds after the start of the next piece of music.
- The starting time of Highlight Scan can be designated at ten or tens of seconds only. A tenth or tenths of seconds can be disregarded.
 - If a piece of music ends before your designated point of time at which Highlight Scan starts, the scanning is performed for its beginning 10 seconds.
 - If a piece of music lasts less than 10 seconds, so does the Highlight Scan.
 - You may wish to change the starting time longer without suspending the function. You may do so, however, only to a relatively long-playing piece of music because, as a matter of course, the time cannot be set so as to come after the end of the music.

Using Random Play

This function uses the built-in microprocessor to randomly play tracks from the disc.

1. Press button ⑥. "RDM" ● will appear on the display. Once the current track has been played, the microprocessor will randomly select the next track.
2. To cancel random play, press button ⑥ again.

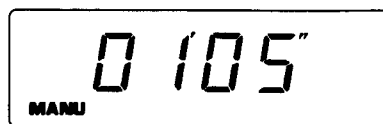
Using Music Repeat

This function lets you listen to a track as many times as you wish.

1. While the track you want to repeat is playing, press button ⑦. "↺" ● will appear on the display. Now the track will repeat until the music repeat function is canceled.
 2. To cancel music repeat, press button ⑦ again.
- When music repeat is not operational, the whole disc will be played repeatedly.

Using Fast Forward and Reverse

1. Press simultaneously both (+) and (–) sides of the button ② "MANU" ● will appear on the display. At this time the display will show the amount of elapsed disc play time.



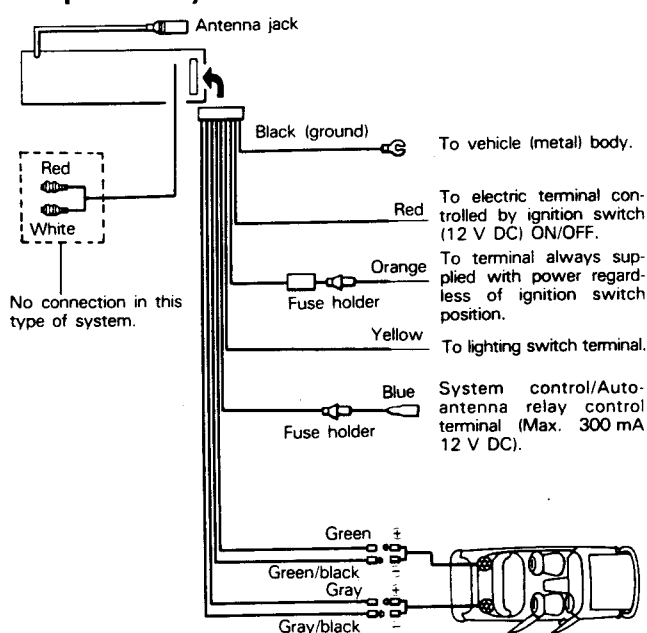
2. Press the (+) side of button ② for fast forward, and the (–) side for reverse.
- Sound is output during fast forward and reverse operations.
 - When a disc in which there are several seconds between tracks is used, the amount of elapsed disc-play time is shown, for example, as –0*02 and –0*01.

5. CONNECTING THE UNITS

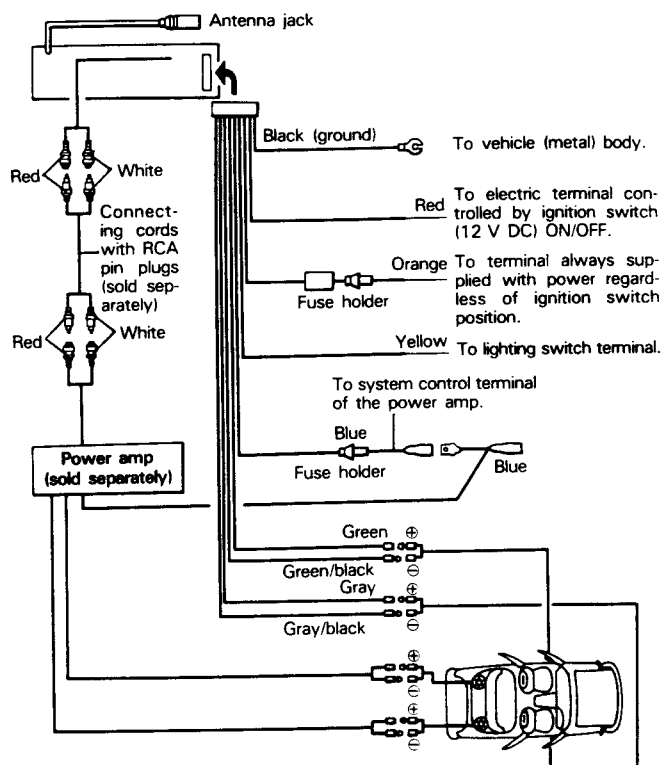
- Before making final connections, make temporary connections then operate the unit to check for any connecting cord problems.
- Refer to the owner's manual for details on connecting the various cords of the power amp and other units, then make connections correctly.
- Be sure to connect the memory power supply lead (orange) to a terminal that is always supplied with power regardless of the vehicle's ignition switch position. If this connection is made incorrectly or is forgotten, the unit will not work at all.
- Don't pass the orange lead through a hole into the engine compartment to connect to the battery. This will damage the lead insulation and cause a very dangerous short.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker \ominus leads are common.
- Speakers connected to this unit must be high-power types possessing minimum rating of 25W and impedance of 4 to 8 ohms. Connecting speakers with output and/or impedance values other than those noted here can damage the speakers.

• DEH-750/UC

2-speaker system



4-speaker system



6. SPECIFICATIONS

General (DEH-750/UC, DEH-80/US)

Power source 14.4 V DC (10.8—15.6 V allowable)
Grounding system Negative type
Max. current consumption 5.5 A
Dimensions (chassis) 178 (W) × 50 (H) × 155 (D) mm
[7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose) 170 (W) × 46 (H) × 14 (D) mm
[6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in.]
Weight 1.6 kg (3.5 lbs)

General (DEH-650/UC, DEH-620/US, DEH-600/EW)

Power source 14.4 V DC (10.8—15.6 V allowable)
Grounding system Negative type
Max. current consumption 5.5 A
Dimensions (chassis) 178 (W) × 50 (H) × 155 (D) mm
[7 (W) × 2 (H) × 6-1/8 (D) in.]
(nose) 170 (W) × 46 (H) × 12 (D) mm
[6-3/4 (W) × 1-3/4 (H) × 1/2 (D) in.]
Weight 1.6 kg (3.5 lbs)

General (DEH-750/ES)

Power source 14.4 V DC (10.8—15.6 V allowable)
Grounding system Negative type
Max. current consumption 5.5 A
Dimensions (chassis) 178 (W) × 50 (H) × 155 (D) mm
(nose) 170 (W) × 46 (H) × 14 (D) mm
Weight 1.6 kg

General (DEH-700SDK/WG, DEH-700/EW)

Power source 14.4 V DC (10.8—15.6 V allowable)
Grounding system Negative type
Max. current consumption 5.5 A
Dimensions (chassis) 180 (W) × 50 (H) × 155 (D) mm
(front face) 188 (W) × 58 (H) × 14 (D) mm
Weight 1.6 kg

Amplifier (UC, US model)

Continuous power output is 10 W per channel min. into 4 Ω , both channels driven 50 to 15,000 Hz with no more than 5% THD.
Max. power output 25 W + 25 W (EIAJ)
Load impedance 4 Ω (4—8 Ω allowable)
Max. output level/output impedance
(pre out) 500 mV/1 k Ω
Tone controls (bass) ± 10 dB (100 Hz)
(treble) ± 10 dB (10 kHz)
Loudness contour +12 dB (100 Hz), +7 dB (10 kHz)
(volume: -30 dB)

Amplifier (ES model)

Max. power output 25 W + 25 W (EIAJ)
Continuous power output 11 W × 2 (1% dist. at 1 kHz)
Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Load impedance 4 Ω (4—8 Ω allowable)
Max. output level/output impedance
(pre out) 500 mV/1 k Ω
Tone controls (bass) ± 10 dB (100 Hz)
(treble) ± 10 dB (10 kHz)
Loudness contour +12 dB (100 Hz), +7 dB (10 kHz)
(volume: -30 dB)

Amplifier (WG, EW model)

Max. power output 25 W + 25 W (EIAJ)
Continuous power output 11 W + 11 W
(1% dist. at 1 kHz)
Load impedance 4 Ω (4—8 Ω allowable)
Nominal output level/output impedance
(pre out) 100 mV/1 k Ω
Tone controls (bass) ± 10 dB (100 Hz)
(treble) ± 10 dB (10 kHz)
Loudness contour +12 dB (100 Hz), +7 dB (10 kHz)
(volume: -30 dB)

CD player

System Compact disc audio system
Usable discs Compact disc
Signal format Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Frequency characteristics 5—20,000 Hz (± 1 dB)
Signal-to-noise ratio 90 dB (1 kHz) (IEC-A network)
Dynamic range 88 dB (1 kHz)
Number of channels 2 (stereo)

FM tuner (UC, US model)

Frequency range 87.9—107.9 MHz
Usable sensitivity 11 dBf (1.0 μ V/75 Ω , mono, S/N: 30 dB)
50 dB quieting sensitivity 16 dBf (1.7 μ V/75 Ω , mono)
Signal-to-noise ratio 70 dB (IHF-A network)
Distortion 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response 30—15,000 Hz (± 3 dB)
Stereo separation 40 dB (at 65 dBf, 1 kHz)
Selectivity 70 dB (2ACA) (± 400 kHz)
Three-signal intermodulation (desire signal level) 50 dBf
(two undesire signal level: 110 dBf)

Three-signal intermodulation

(desire signal level) (DEH-620/US) 55 dBf
(two undesire signal level: 110 dBf)

AM tuner (UC, US model)

Frequency range 530—1,710 kHz
Usable sensitivity 18 μ V (25 dB) (S/N: 20 dB)
Selectivity 50 dB (± 10 kHz)

MW tuner (WG, EW model)

Frequency range 531—1,602 kHz
Usable sensitivity 18 μ V (25 dB) (S/N: 20 dB)
Selectivity 50 dB (± 9 kHz)

LW tuner (WG, EW model)

Frequency range 153—281 kHz
Usable sensitivity 30 μ V (30 dB) (S/N: 20 dB)
Selectivity 50 dB (± 9 kHz)

FM tuner (WG, EW, ES model)

Frequency range 87.5—108 MHz
Usable sensitivity 11 dBf (1.0 μ V/75 Ω , mono, S/N: 30 dB)
50 dB quieting sensitivity 16 dBf (1.7 μ V/75 Ω , mono)
Signal-to-noise ratio 70 dB (IEC-A network)
Distortion 0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response 30—15,000 Hz (± 3 dB)
Stereo separation 40 dB (at 65 dBf, 1 kHz)

AM tuner (ES model)

Frequency range 531—1,602 kHz (9 kHz)
530—1,710 kHz (10 kHz)
Usable sensitivity 18 μ V (25 dB) (S/N: 20 dB)
Selectivity 50 dB (± 9 kHz)
50 dB (± 10 kHz)

These specifications were determined and are presented in accordance with specification standards established by the Ad Hoc Committee of Car Stereo Manufacturers.

Note:

Specifications and the design are subject to possible modification without notice due to improvements.

7. DISASSEMBLY

● Removing the Case

1. Insert and turn a flat screwdriver to remove the case.
2. Raise the case to remove.

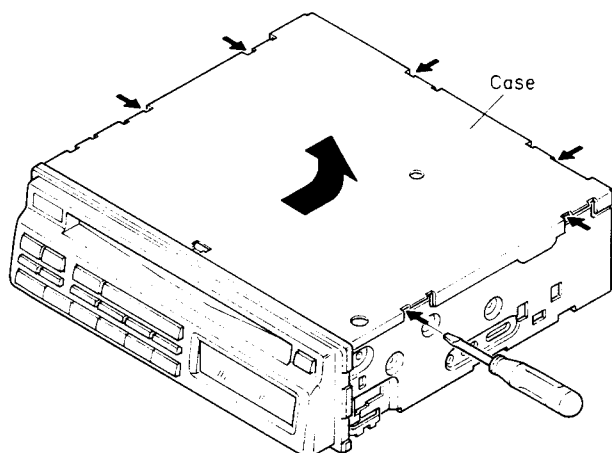


Fig. 1

● Removing the Grille Assy (DEH-650/UC, 620/US, 600/EW)

1. Press the tabs at three locations indicated by arrows, and then pull out the grille assy.
2. Disconnect the connector.

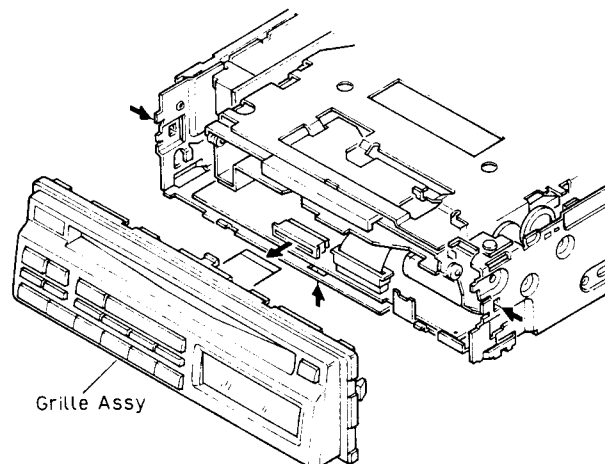


Fig. 2-2

● Removing the Grille Assy (DEH-750/UC, ES, 80/US, 700SDK/WG, 700/EW)

1. Press the tabs at three locations indicated by arrows, and then pull out the grille assy.
2. Disconnect the two connectors.

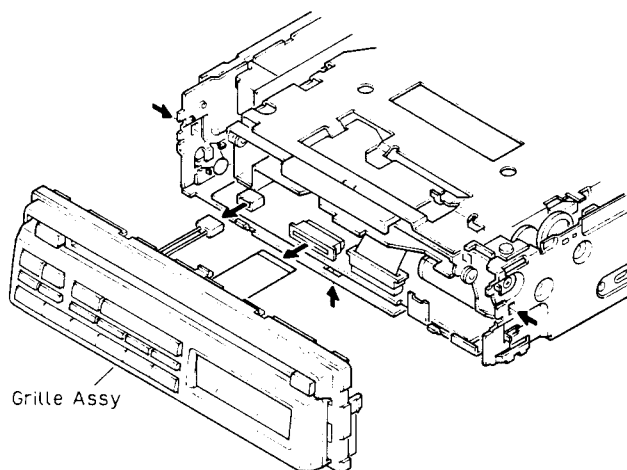


Fig. 2-1

● Removing the Display Unit (DEH-750/UC, ES, 80/US, 700SDK/WG, 700/EW)

1. Remove the four screws, and then remove the grille.
2. Pull out the display unit.

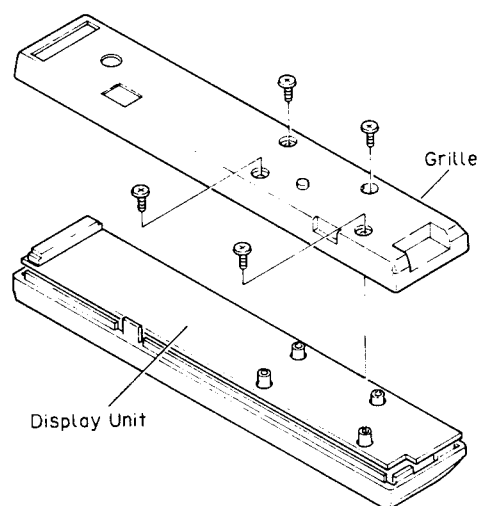


Fig. 3

● Removing the CD Mechanism Unit

1. Remove the four screws.
2. Disconnect the two connectors, and then remove the CD mechanism Unit.

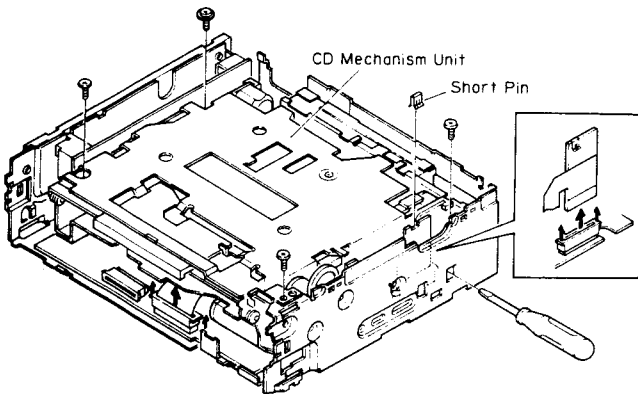


Fig. 4

NOTE: When remove the flexible p.c. board, always insert a shorting pin or insert an inter-pattern short (jumper) before disconnecting the flexible p.c. board from the connector.

● Removing the Amp Unit

1. Remove the four screws A, and the four screws B.
2. Remove the screw C, and then remove the amp unit.

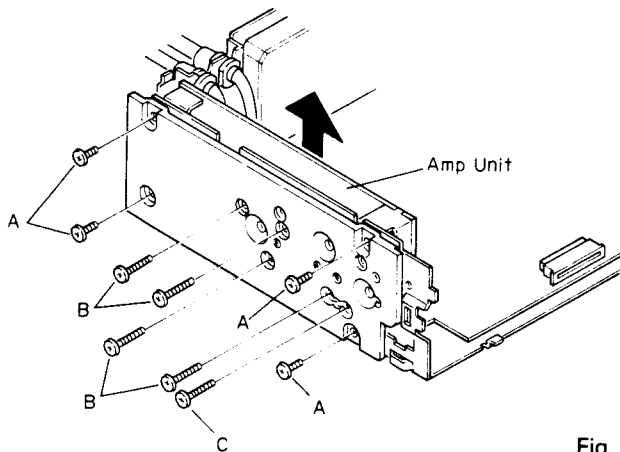


Fig. 5

● Removing the CD Tuner Unit

1. Remove the screw D, and then remove the holder.
2. Remove the screw E and F.
3. Remove the screw G, and then remove the holder.
4. Unbend the tabs at five locations indicated by arrows until straight.
5. Raise up on CD tuner unit to remove it from chassis unit.

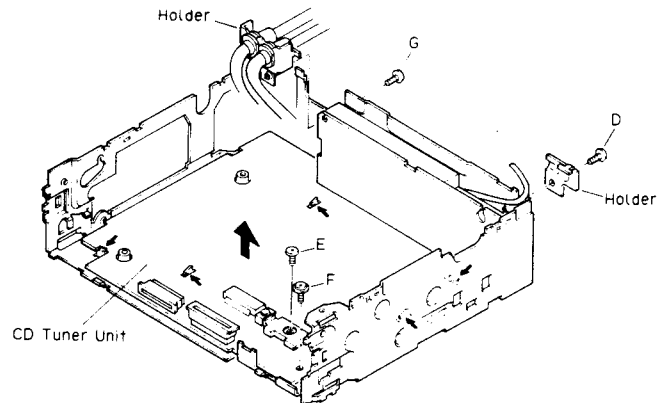


Fig. 6

8. ADJUSTMENT

1) Precautions

- This unit uses a single power supply (+5V) of the regulator. The signal reference potential, therefore, is connected to pin no. 26 (approx. 2.5V) of IC351 (CXA1081Q) instead of GND. (VC at test point)

If VC and GND are connected to each other by mistake during adjustments, not only will it be impossible to measure the potential correctly, but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this, take special note of the following.

Do not connect the negative probe of the measuring equipment to VC and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to VC with the channel 2 negative probe connected to GND.

And since the frame of the measuring instruments is usually at the same potential as the negative probe, change the frame of the measuring instrument to floating status.

If by accident VC comes in contact with GND, immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.
- Before proceeding to further adjustments and measurements after switching regulator ON, let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode, be very careful to avoid mechanical and/or electrical shocks to the system when making adjustments.
- Test mode starting procedure
While pressing the VOL - button and the VOL + button, press Clear button.
- Test mode cancelation
Press Clear button.
- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit. Consequently, if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment, the following malfunctions may occur.
 - During PLAY, even if the eject button is pressed, the disc will not be ejected and the unit will remain in the PLAY mode.
 - The unit will not load a disc.

When the unit malfunctions this way, either re-position the light source, move the unit or cover the photo transistor.

2) Adjustment Point

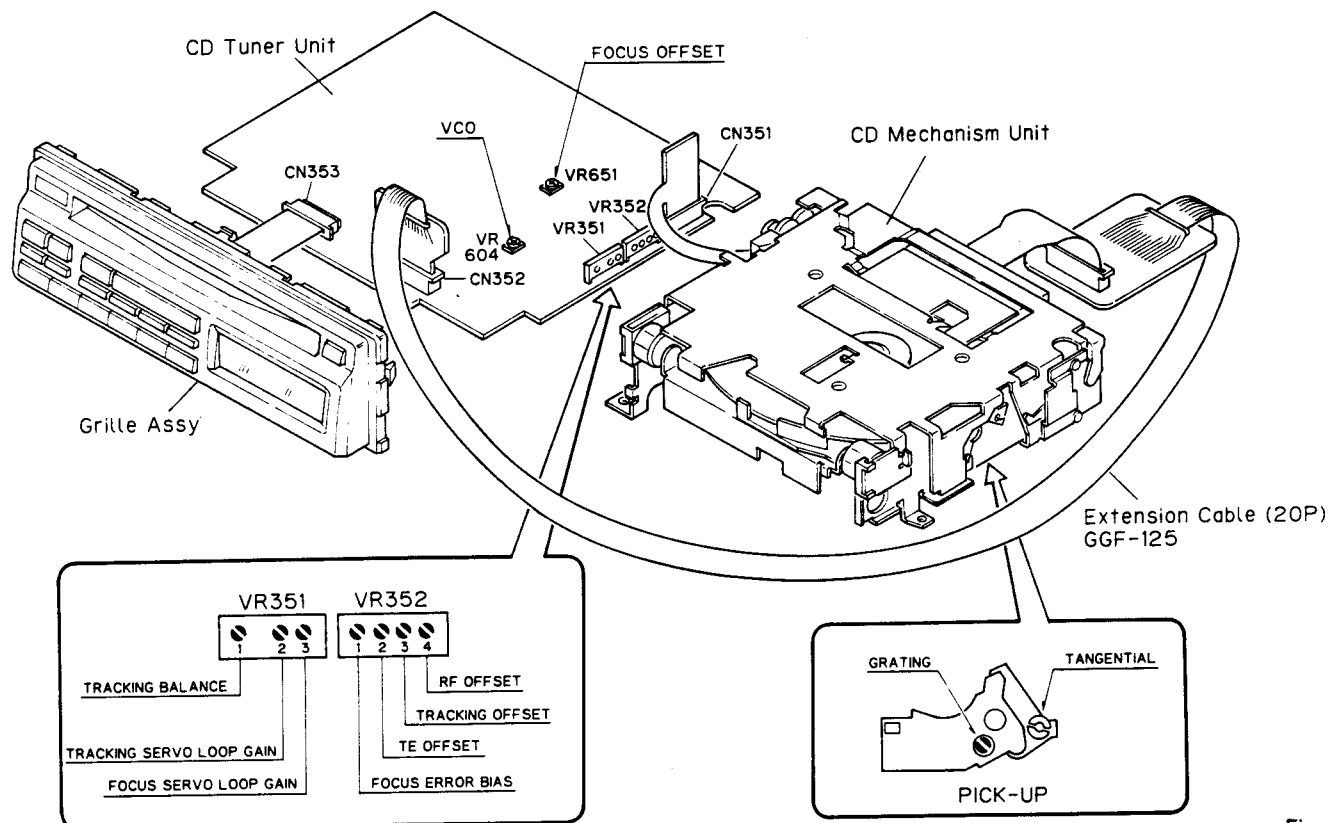
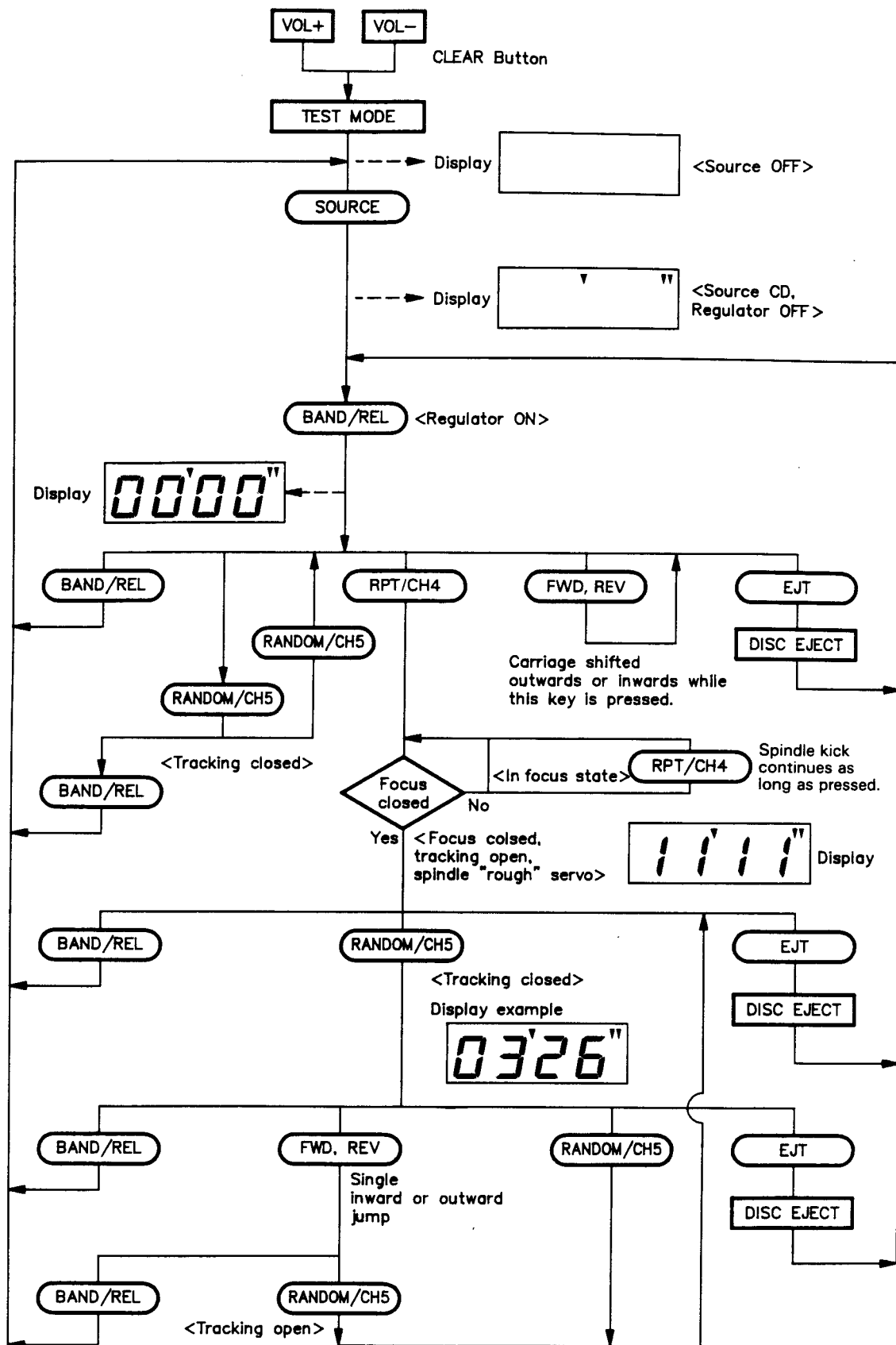


Fig. 7

• Flow Chart



- Test Point
- CD Tuner Unit

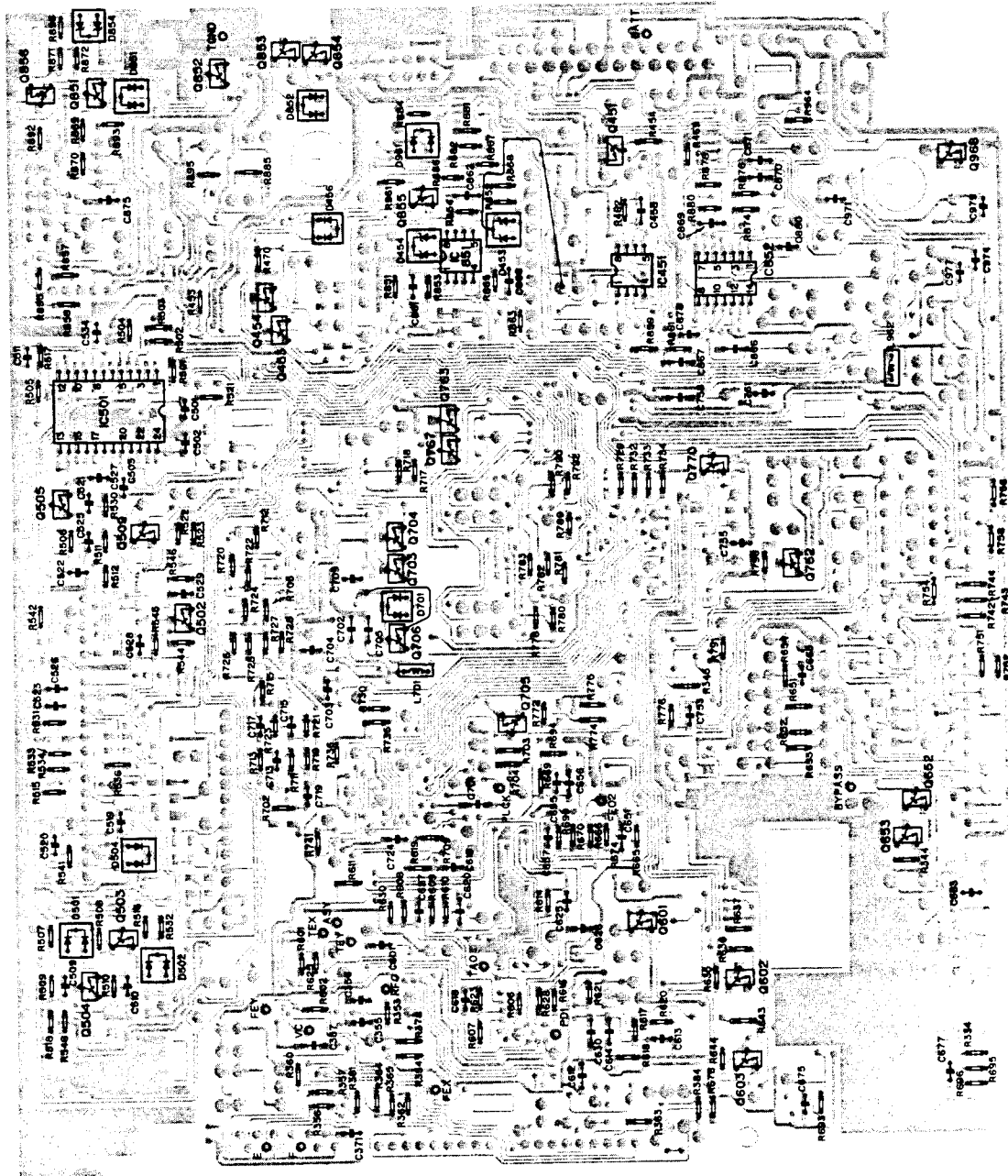


Fig. 8

8.1 Focus Offset Adjustment

- Purpose: To adjust the electrical offset of the focus amplifier to zero.
- Maladjustment symptoms: No focus closing

- Measuring equipment/
jigs
- Measuring point
- Test disc and setting
- Adjustment position

- Multi-meter or oscilloscope
- FEO2
- No disc, test mode
- VR651

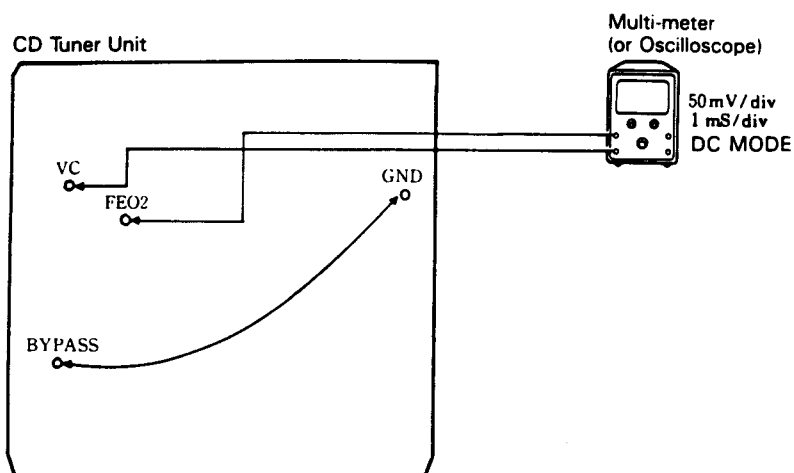


Fig. 9

Adjustment Procedure

1. Connect BYPASS to GND.
(Perform the following steps to stop the drive.)
2. Switch regulator ON.
3. Using VR651, adjust the FEO2 DC voltage in reference to VC to a value of $0 \pm 25\text{mV}$.
4. Perform the following steps while BYPASS is connected to GND.

8.2 VCO Free Run Frequency Adjustment

- Purpose: To adjust the EFM decoder reference clock free- run frequency to a suitable value
- Maladjustment symptoms: Spindle lock not possible, distorted sound or no sound at all

- | | |
|--|--|
| <ul style="list-style-type: none"> ● Measuring equipment/ jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> • Frequency counter, extension cables • Pin no.70 (PLCK) of IC701 (CXD1167Q) • No disc • VR604 • Test mode |
|--|--|

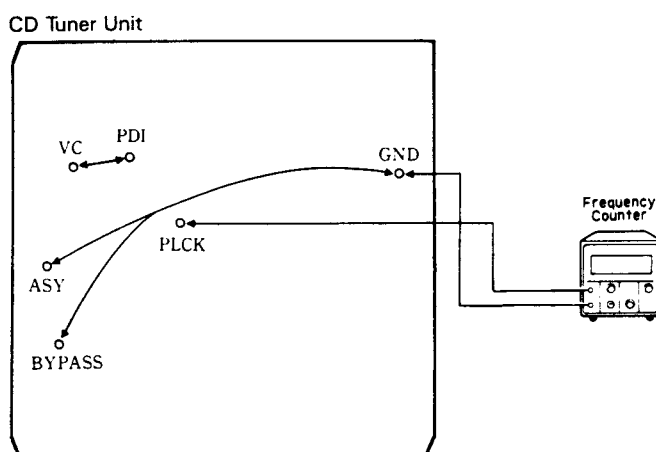


Fig. 10

Adjustment Procedure

1. Connect pin no.7 (TP ASY) of IC351 to GND.
Connect BYPASS to GND.
2. Connect pin no.1 (TP VC) of IC601 to pin no.28 (TP PDI).
3. Switch regulator ON while in test mode.
4. Connect the frequency counter to pin no.70 (TP PLCK) of IC701 (CXD1167Q).
5. Adjust VR604 to obtain a frequency of 4.59MHz ± 0.01 MHz.
6. Switch regulator OFF.
7. Disconnect the leads connecting TP VC to TP PDI, and TP ASY to GND.

Note: Connect TP VC and TP PDI with leads kept as short as possible.

Note: Connect the frequency counter ground to TP GND as shown in the figure.

8.3 RF Offset Adjustment

- Purpose: To adjust the RF amplifier offset to a suitable value
- Maladjustment symptoms: Focus closure fails readily

- | | |
|---|--|
| <ul style="list-style-type: none"> ● Measuring equipment/jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> ● Oscilloscope ● RFO ● No disc ● VR352-4 (RFO) ● Test mode |
|---|--|

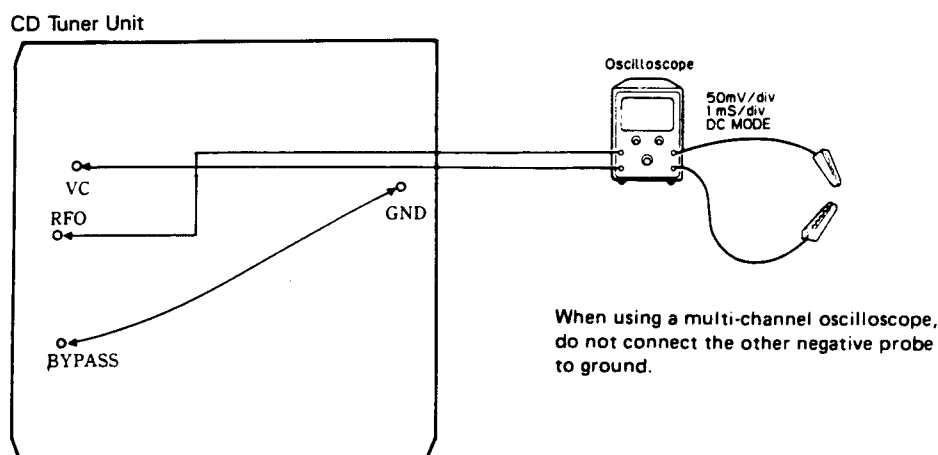


Fig. 11

Adjustment Procedure

1. Connect BYPASS to GND.
2. Switch regulator ON.
3. Using the oscilloscope, measure the RFO DC voltage in reference to VC, and adjust VR352-4 (RFO) to obtain a reading of $+40 \pm 10\text{mV}$.

8.4 tracking Offset Adjustment

- Purpose: To adjust the electrical offset of the tracking amplifier to zero
- Maladjustment symptoms: Search times too long, carriage run-away

- | | |
|--|--|
| <ul style="list-style-type: none"> ● Measuring equipment/
jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> ● Oscilloscope ● TAO low-pass filter output ● No disc ● Test mode ● VR352-3 (TO) |
|--|--|

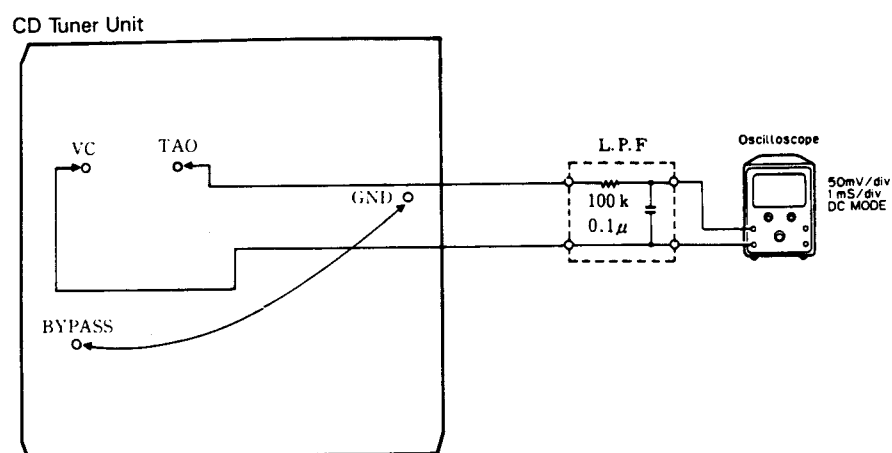


Fig. 12

Adjustment Procedure

1. Insert a low-pass filter between TAO and VC.
2. Check that BYPASS is connected to GND.
3. Switch regulator ON.
4. Using the oscilloscope, measure the TAO LPF output DC voltage in reference to VC, and adjust VR352-3 (TO) to obtain a reading of $0 \pm 25\text{mV}$.
The low-pass filter may be left in place for later adjustments.

8.5 TE Offset Adjustment—I

- **Purpose:** To adjust the electrical offset of the tracking servo to zero.
- **Maladjustment symptoms:** Search times too long, carriage run-away

- | | |
|--|---|
| <ul style="list-style-type: none"> ● Measuring equipment/
jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> ● DC voltmeter ● TAO low-pass filter output ● No disc • Test mode ● VR352-2 (TEO) |
|--|---|

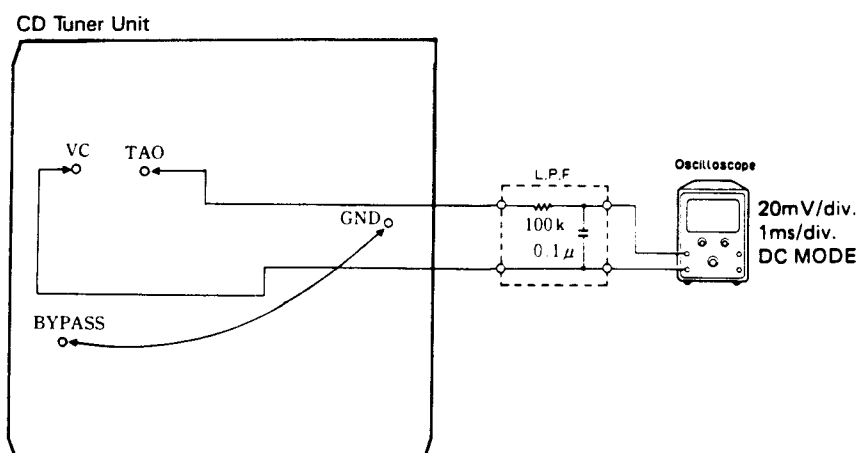


Fig. 13

Adjustment Procedure

1. Check that BYPASS is connected to GND.
2. Switch regulator ON while in test mode.
3. Press the **RANDOM/CH5** key to close tracking.
4. Using VR352-2 (TEO), adjust the TAO L.P.F. output DC voltage in reference to VC to a value of $0 \pm 10\text{mV}$.
5. Switch regulator OFF.

8.6 Tracking Balance Adjustment—I

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

- | | |
|---|--|
| <ul style="list-style-type: none"> ● Measuring equipment/jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> ● Oscilloscope ● TEY (Tracking error signal), low-pass filter output ● SONY TYPE 4 (or TYPE 3) • Test mode ● VR351-1 (T. BAL) |
|---|--|

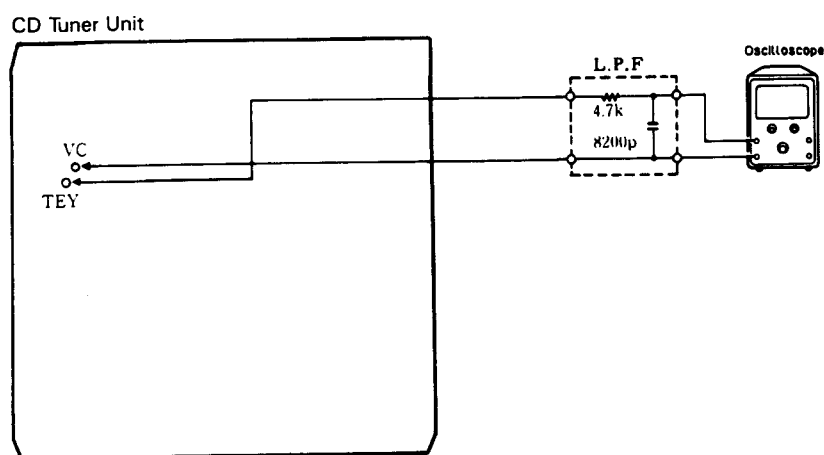
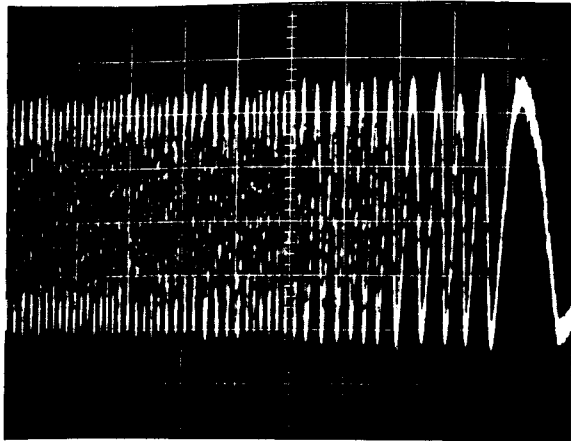


Fig. 14

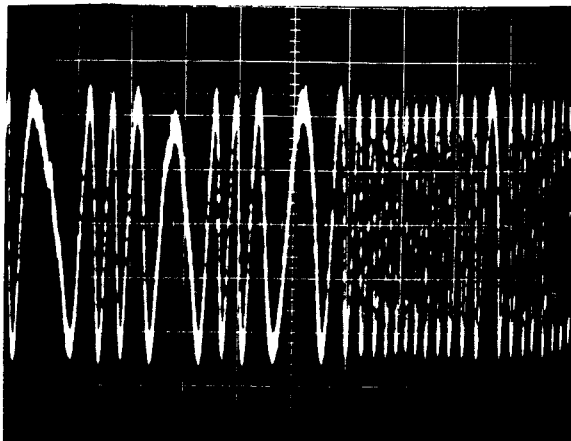
Adjustment Procedure

1. After checking that regulator is OFF, connect the low-pass filter as shown in the diagram.
2. Disconnect BYPASS from ground.
3. Load the test disc (SONY TYPE 4). Switch regulator ON.
4. Using the **FWD** or **REV** key, move the pick-up to about the center of the signal surface.
5. Press the **RPT/CH4** key to close focus.
6. Using an oscilloscope, observe the TEY signal in respect to VC. Then adjust VR351-1 (T.BAL) to set the positive and negative amplitudes to the same levels. (See Fig. 15-17)
7. Switch the power OFF.
The low-pass filter may be left in place for later adjustments.



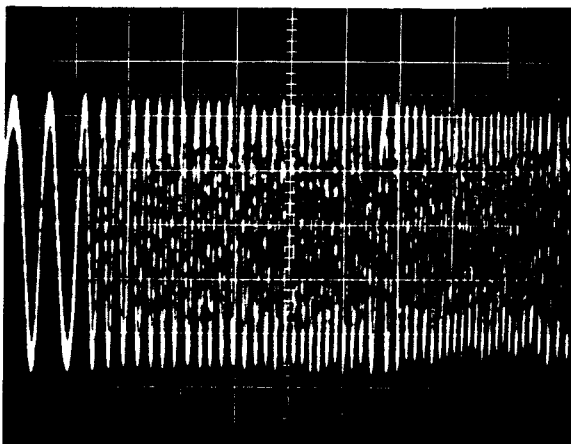
+5% NG

Fig. 15



±0% OK

Fig. 16



-5% NG

Fig. 17

10ms/div.
0.2V/div.
DC Mode

8.7 Tangential Skew Check

- Purpose: To check whether tangential skew has been misaligned or not when replacing the pick-up unit. -
- Maladjustment symptoms: No disc playback; track jumping

- | | |
|---|--|
| <ul style="list-style-type: none"> ● Measuring equipment/jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> ● Oscilloscope, extension connectors, screwdriver ● RFO ● SONY TYPE 4 (or TYPE 3) • Normal mode ● Pick-up tangential adjustment screw |
|---|--|

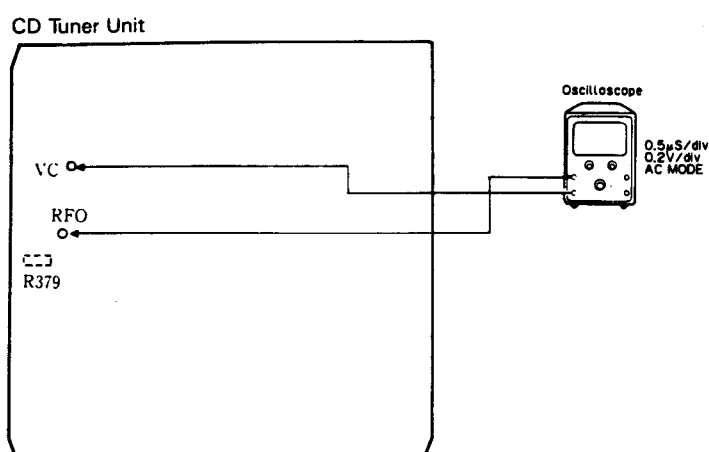


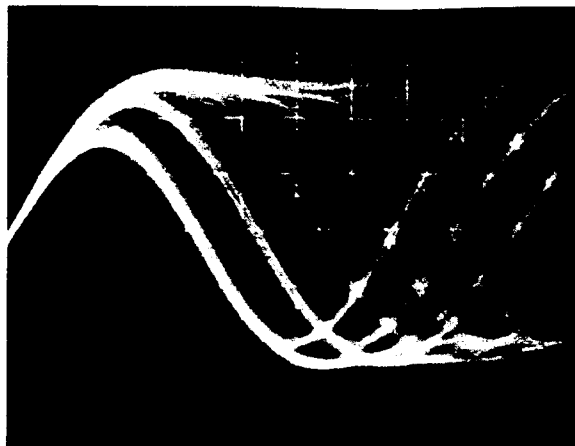
Fig. 18

Adjustment Procedure (with R379 removed)

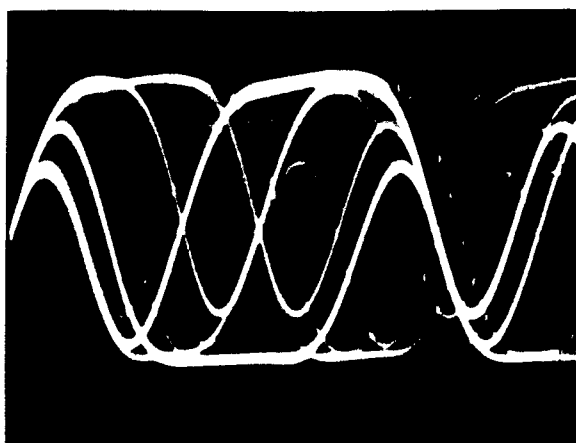
1. Remove R379 (but reconnect after completing adjustment).
2. Play tune TNO 7 in normal mode. (TYPE 3: TNO 23)
3. Check that the valley at the 11T section of the RF waveform is flat.
4. If out of adjustment, readjust to obtain a flat RF waveform. (See Fig. 19-24) Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.)
5. Switch the power OFF and reconnect R379.
6. Apply "screw-lock" to the tangential adjustment screw.
7. After adjusting tangential skew, also adjust the grating.
8. If tangential skew is seriously out of adjustment, carriage stopping and run-away tend to occur in normal mode. In this case,
 - a) Switch to test mode,
 - b) Shift the pick-up to signal surface center using **FWD** or **REV** key.
 - c) Press the **RPT/CH4** key to close focus.
 - d) Press the **RANDOM/CH5** key to close the tracking.
 - e) Observe RFO in respect to VC, and turn the tangential adjustment screw to obtain a flat waveform at the 11T section.
 - f) Repeat the adjustment resuming from step 2.



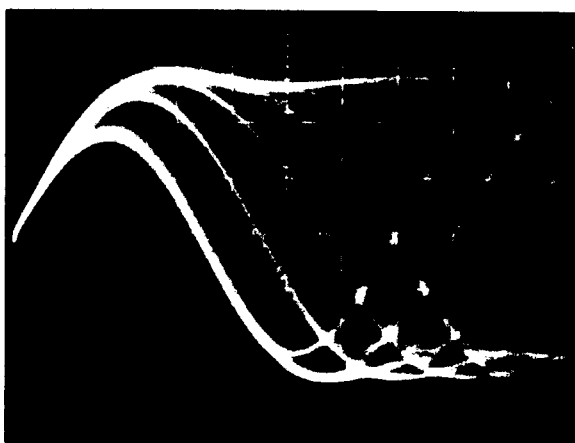
NG Fig. 19



NG Fig. 20



OK Fig. 21

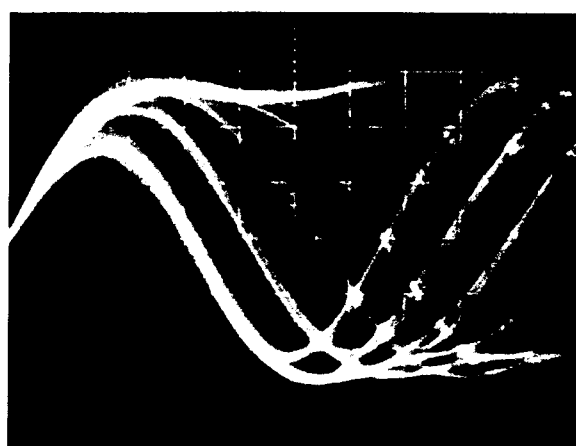


OK Fig. 22



NG Fig. 23

Play tune TNO 7 (TYPE4)

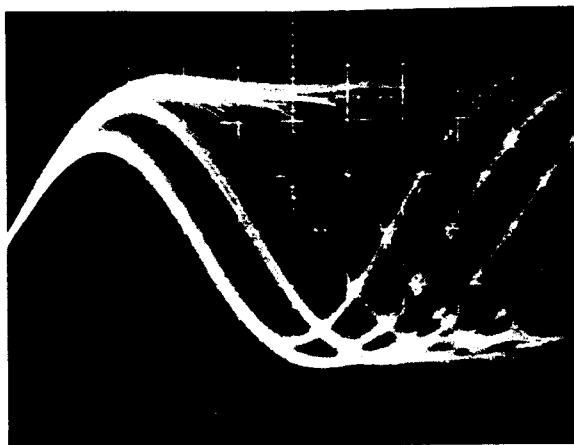


NG Fig. 24

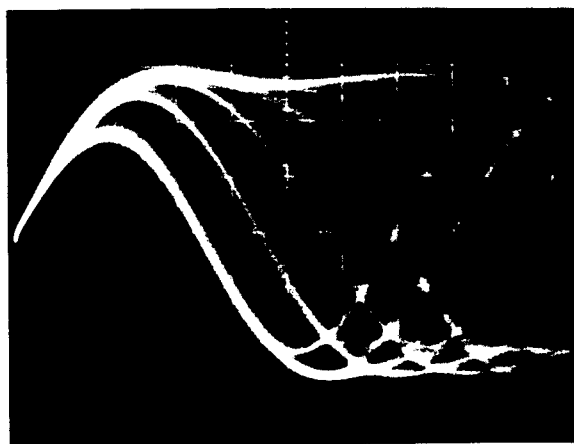
Play tune TNO 12 (TYPE4)

Adjustment Procedure (without R379 removed)

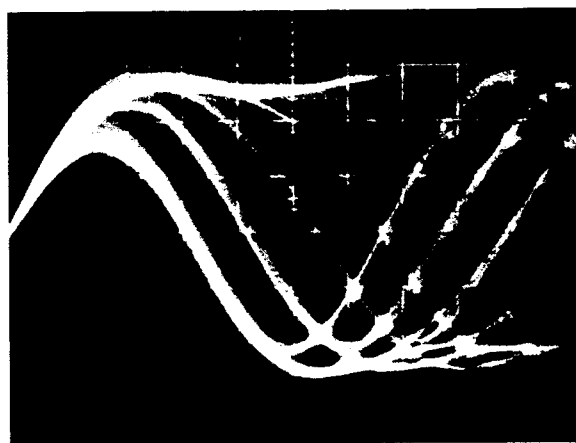
1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Turn the tangential adjustment screw to obtain a good RF waveform eye pattern. Turn the adjustment screw both clockwise and counterclockwise to points where the eye pattern deteriorates, and take the midway point as the adjustment point. As a general guide, look for an overall clear waveform, and one of the diamond shapes in the eye pattern. The diamond shapes should appear in fine lines at the point of optimum adjustment. Take care not to knock the pick-up with the screwdriver at this stage. (This kind of accident can result in loss of focus.) (See Fig. 25-27)
3. Apply "screw-lock" to the tangential adjustment screw.
4. After adjusting tangential skew, also adjust the grating.



NG Fig. 25



OK Fig. 26



NG Fig. 27

8.8 Grating Adjustment

- Purpose: The grating may need adjustment in a replaced pick-up assembly.
- Maladjustment symptoms: No disc playback; track jumping

- | | |
|--|---|
| <ul style="list-style-type: none"> ● Measuring equipment/
jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> • Oscilloscope, clock driver, grating adjustment filter (bandpass filter), AC millivoltmeter, two low-pass filters • TEY, E LPF output, F LPF output • SONY TYPE 4 (or TYPE 3) • Test mode • Pick-up grating adjustment hole |
|--|---|

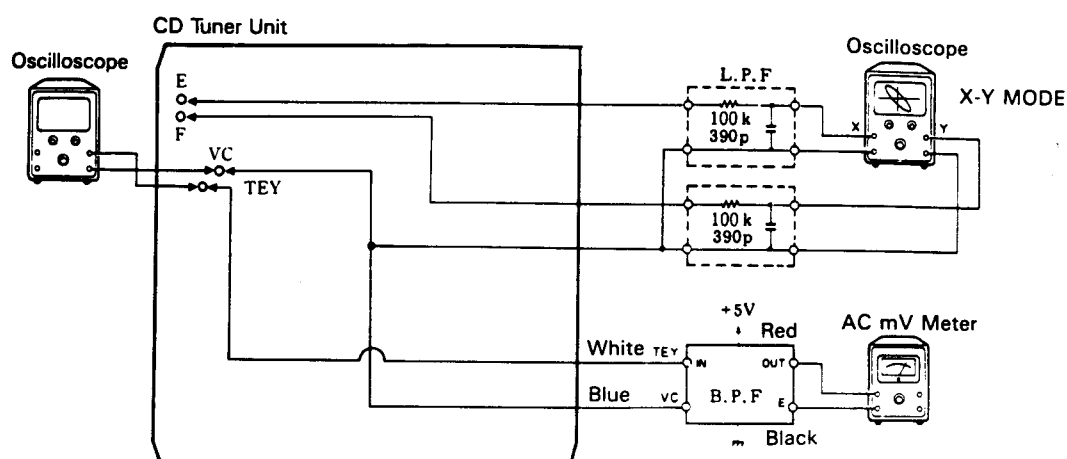


Fig. 28

Adjustment Procedure

1. Connect a low-pass filter (100k, 390p) to test points E, F, and VC as shown in the above diagram.
2. Switch regulator ON in test mode, and load a disc.
3. Press the **RPT/CH4** key to close focus.
4. Press the **RANDOM/CH5** key to close tracking.
5. Press the **FWD** or **REV** key, move the pick-up to about the center of the signal surface (tune TNO 6). (TYPE 3: TNO 7)
6. Press the **RANDOM/CH5** key to open tracking.
7. While monitoring the TEY filter output by AC milli-voltmeter, turn the grating adjustment hole slowly. The AC voltage increases and decreases while turning the screw. Search for the minimum voltage level. (This corresponds to the position where the grating is on a track, and is referred to as the null point.)
8. Then while monitoring TEY by oscilloscope, turn the driver slowly clockwise from the null point (as seen from under the lens) until the first waveform peak amplitude is reached. (See Fig. 30-35)

9. With the E low-pass filter output connected to the X axis of the oscilloscope, and the F low-pass filter output connected to the Y axis, apply an input in AC mode and observe the Lissajous figure.
10. Using the driver, adjust the Lissajous figure to a single line (or as close as possible).
11. Switch regulator OFF and remove the filters.

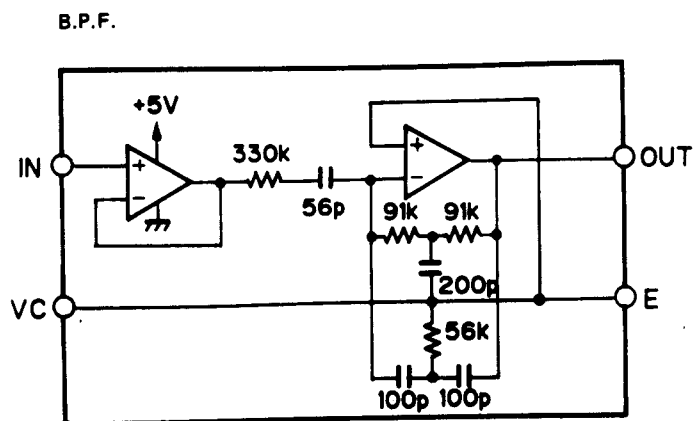


Fig. 29

TEY waveform 10ms/div, 500mV/div



Fig. 30

Null Point

Lissajous figure (AC input)
Horizontal axis E 20mV/div
Vertical axis F 20mV/div

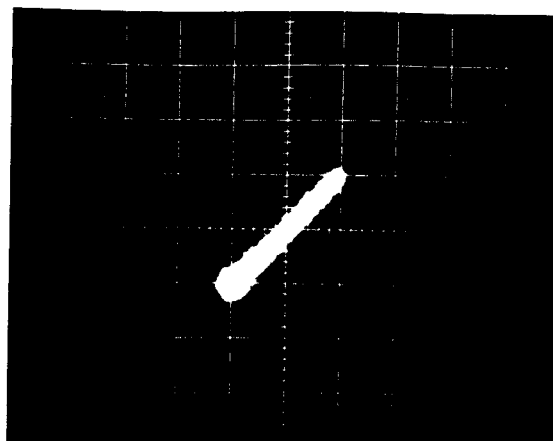


Fig. 31

"Rough" adjustment



Fig. 32

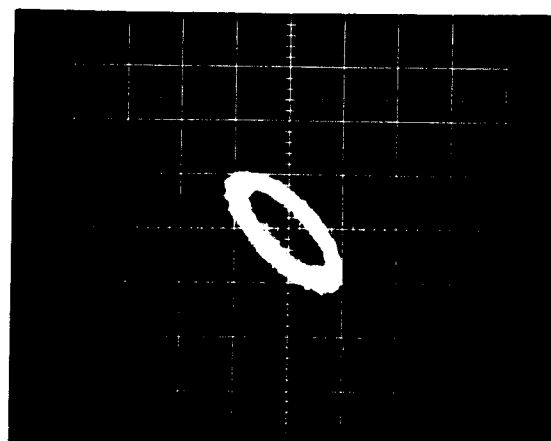


Fig. 33

Final adjustment

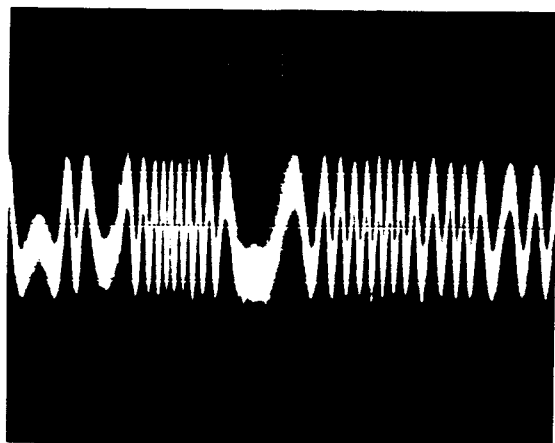


Fig. 34

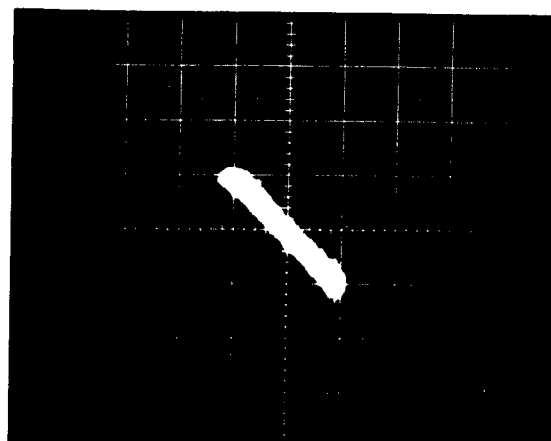


Fig. 35

8.9 Focus Bias Adjustment

- Purpose: To adjust the focus servo bias to an optimum value
- Maladjustment symptoms: Focus closing difficulty, poor playability

- Measuring equipment/
jigs
- Measuring point
- Test disc and setting
- Adjustment position

- Oscilloscope
- RFO
- SONY TYPE 4 (or TYPE 3) • Normal mode
- VR352-1 (FEB)

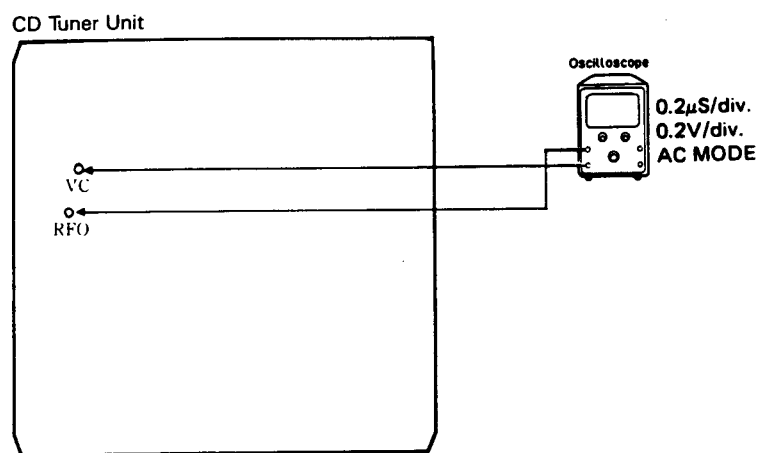
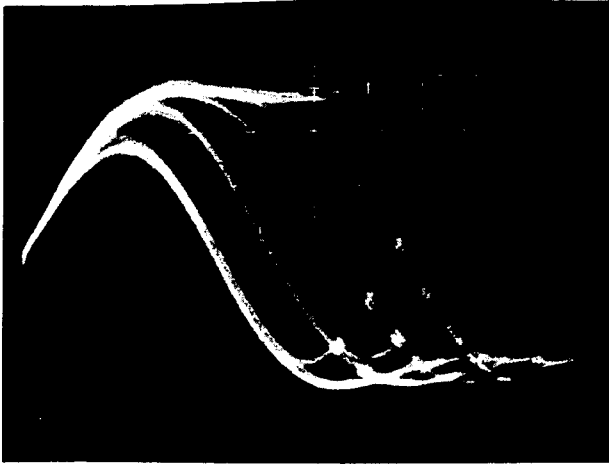


Fig. 36

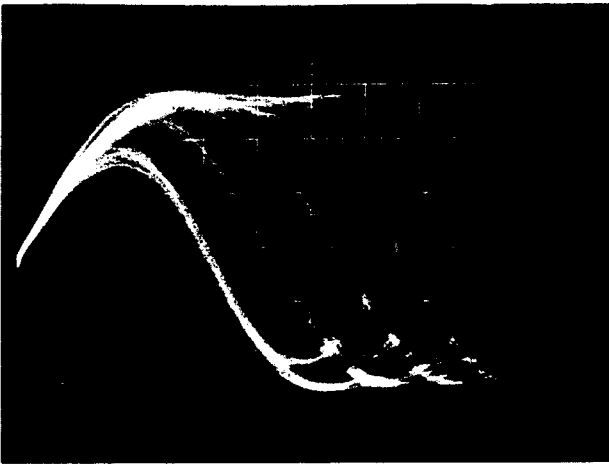
Adjustment Procedure

1. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
2. Observe RFO in respect to VC in the oscilloscope, and adjust VR352-1 (FEB) to obtain maximum RF and optimum eye pattern. (See Fig. 37 and 38)



OK

Fig. 37



0.2 μ s/div.
0.2V/div.
AC Mode

Before adjustment

Fig. 38

8.10 Focus Servo Loop Gain Adjustment

- Purpose: To adjust the focus servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration, focus closure fails readily

- | | |
|---|---|
| <ul style="list-style-type: none"> ● Measuring equipment/jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> • Oscillator, gain adjustment filter, dual meter milli-voltmeter • FEX, FEY • SONY TYPE 4 (or TYPE 3) • Normal mode • VR351-3 (FG) |
|---|---|

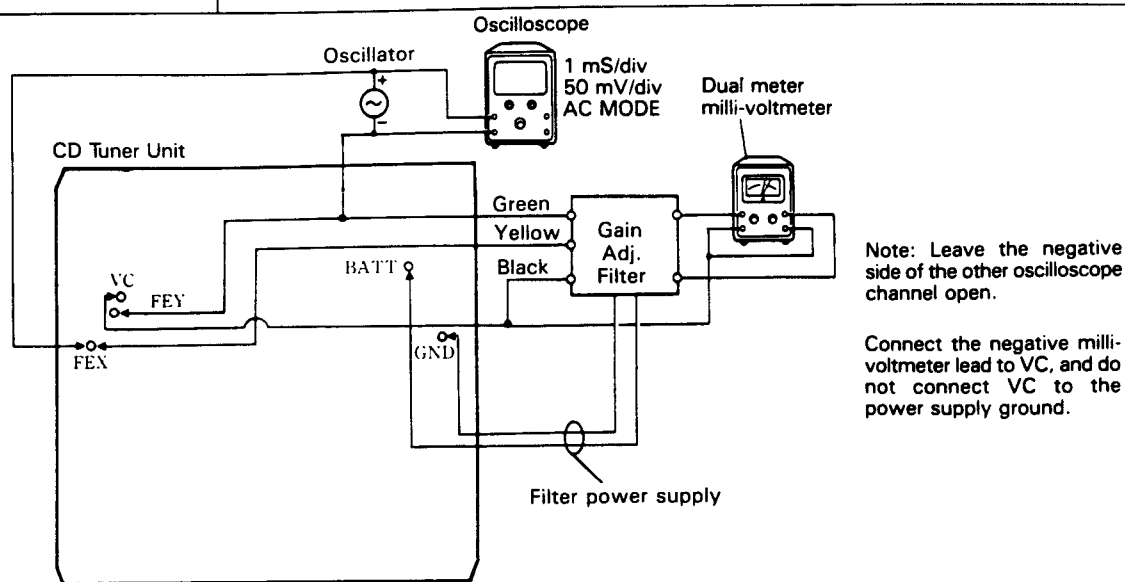


Fig. 39

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1kHz, and observe the FEX/FEY output in the oscilloscope. Adjust the oscillator output to obtain a FEX/FEY output of 200mVp-p.
4. Adjust VR351-3 (FG) to obtain a milli-voltmeter difference of $0 \pm 0.5\text{dB}$.

8.11 Tracking Servo Loop Gain Adjustment

- Purpose: To adjust the tracking servo loop gain to an optimum value
- Maladjustment symptoms: Poor playability, reduced resistance to vibration

- | | |
|---|---|
| <ul style="list-style-type: none"> ● Measuring equipment/jigs ● Measuring point ● Test disc and setting ● Adjustment position | <ul style="list-style-type: none"> • Oscillator, gain adjustment filter, dual meter milli-voltmeter • TEX, TEY • SONY TYPE 4 (or TYPE 3) • Normal mode • VR351-2 (TG) |
|---|---|

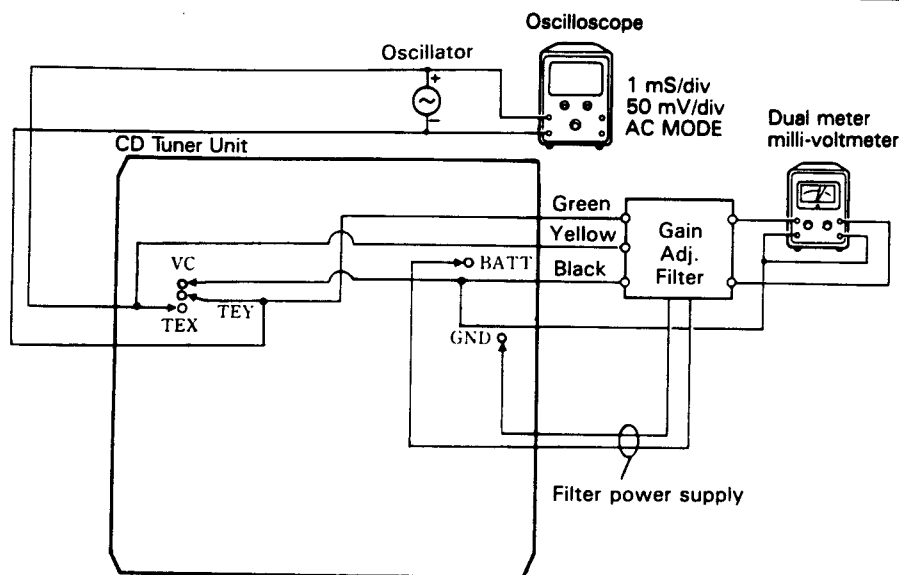


Fig. 40

Adjustment Procedure

1. After checking that the power is OFF, connect the gain adjustment filter and measuring equipment as shown in the above diagram.
2. Play tune TNO 12 in normal mode. (TYPE 3: TNO 14)
3. Set the oscillator to 1.4kHz, and observe the TEX/TEY output in the oscilloscope. Adjust the oscillator output to obtain a TEX/TEY output of 200mVp-p.
4. Adjust VR351-2 (TG) to obtain a milli-voltmeter difference of $0 \pm 0.5\text{dB}$.

8.12 TE Offset Adjustment — II

- Purpose: To adjust the electrical offset of the tracking servo to zero.
- Maladjustment symptoms: Search times too long, carriage run-away

- Measuring equipment/
jigs
- Measuring point
- Test disc and setting
- Adjustment position

- DC voltmeter
- TAO low-pass filter output
- No disc • Test mode
- VR352-2

Adjustment Procedure

Same as for TE offset adjustment - I, but with the DC voltage of the TAO LPF output adjusted to $0 \pm 50\text{mV}$.

The purpose of this additional adjustment is to correct any deviations generated when carrying out the tracking balance and tracking servo loop gain adjustments after completing TE offset adjustment - I.

8.13 Tracking Balance Adjustment—II

- Purpose: To adjust the tracking servo offset to zero.
- Maladjustment symptoms: Search times too long, poor playability, carriage run-away

- | | |
|---|---|
| <ul style="list-style-type: none">● Measuring equipment/
jigs● Measuring point● Test disc and setting● Adjustment position | <ul style="list-style-type: none">● Oscilloscope● TEY low-pass filter output● SONY TYPE 4 (or TYPE 3) • Test mode● VR351-1 |
|---|---|

Adjustment Procedure

Steps 1 thru 5 same as tracking balance adjustment-I.

6. Check that the level difference between the positive and negative amplitudes of the TEY signal is within 5% (See Fig. 15-17). If greater than 5%, adjust with VR351-1.
7. If further adjustment was necessary in step 6, repeat TE off-set adjustment - II.

8.14 Tuner and Clock Section

• Connection Diagram

NOTICE: Select C1 so that total capacity of 80pF attained from the direction of the receiver jack.
Z: Output impedance of SSG.

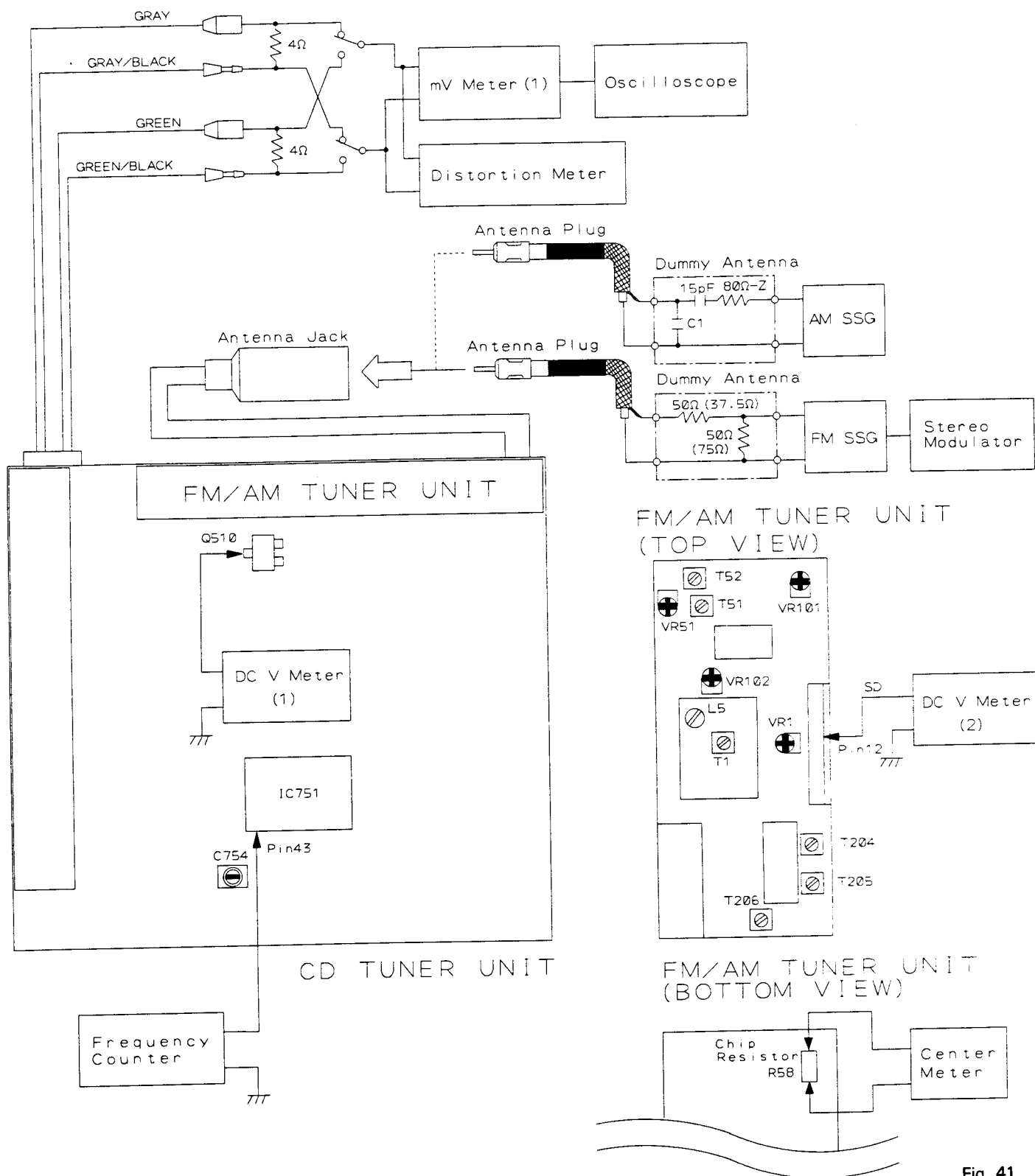


Fig. 41

MW/LW ADJUSTMENT (DEH-700SDK/WG, DEH-700, 600/EW)

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dB μ V)			
Tuning Volt	1	(MW MODE)		1,602	—	Verify that DC V Meter (1) is less than 6.5V.
	2	(LW MODE)		153	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	999	20—25	999	T204, 205, 206	mV Meter (1):Maximum

AM ADJUSTMENT (DEH-750/UC, ES, DEH-80, 620/US, DEH-650/UC)

*:ES model when tuning step at 9kHz.

	No.	AM SSG (400Hz, 30%)		Displayed Frequency (kHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (kHz)	Level (dB μ V)			
Tuning Volt	1			1,710 *(1,602)	—	Verify that DC V Meter (1) is less than 6.5V.
	2			530 *(531)	—	Verify that DC V Meter (1) is more than 2.0V.
IF	1	1,000 *(999)	20—25	1,000 *(999)	T204, 205, 206	mV Meter (1):Maximum

FM ADJUSTMENT

※ Stereo MOD. : 1kHz, L+R=90% , Pilot=10%

*: US and UC model

	No.	FM SSG (400Hz, 100%)		Displayed Frequency (MHz)	Adjusting Point	Adjustment Method (Switch Position)
		Frequency (MHz)	Level (dB μ V)			
IF	1	98.1	60	98.1	T51	Center Meter:0
	2	98.1	60	98.1	T52	Distortion Meter:Minimum
	3	Repeat No.1-2 alternately so that the center meter indicates the 0 output and distortion meter indicates minimum output.				
Front End	1			108.0 *(107.9)	L5	DC V Meter (1): $6.2 \pm 0.2V$
	2			87.5 *(87.9)	—	Verify that DC V Meter (1) is more than $2.1 \pm 0.6V$
	3	98.1	8	98.1	T1	Distortion Meter:Minimum
Soft Mute	1	98.1	60	98.1	—	mV Meter (1): A dB
	2	98.1	10	98.1	VR102	mV Meter (1): A-3dB
ARC	1	98.1※	35	98.1	VR101	mV Meter (1): Separation 5dB
SD	1	98.1	17	98.1	VR51	DC V Meter (2): Approx. 5V
	2	98.1	16	98.1	—	Verify that DC V Meter (2) is approx. 0V.
	3	98.1	55	98.1	VR1	DC V Meter (2): Approx. 5V
	4	98.1	54	98.1	—	Verify that DC V Meter (2) is approx. 0V.

CLOCK ADJUSTMENT (DEH-750/UC, ES, DEH-80, 620/US, DEH-650/UC)

	No.	Adjustment point	Adjustment Method
	1		Press the CLEAR button
	2		Set IC751 TESTIN (24 pin) to L (i.e., connect to GND).
	3		Measure the frequency output from DISB/CLOCK (43 pin). (This is output only when TESTIN is in the L state.)
	4	C754	Frequency counter: 1.048567MHz \pm 2Hz

Note: Since the 43 pin acts also as a DISB terminal, adjustment should be made with all of sources kept OFF.

9. BLOCK DIAGRAM

• DEH-750/UC

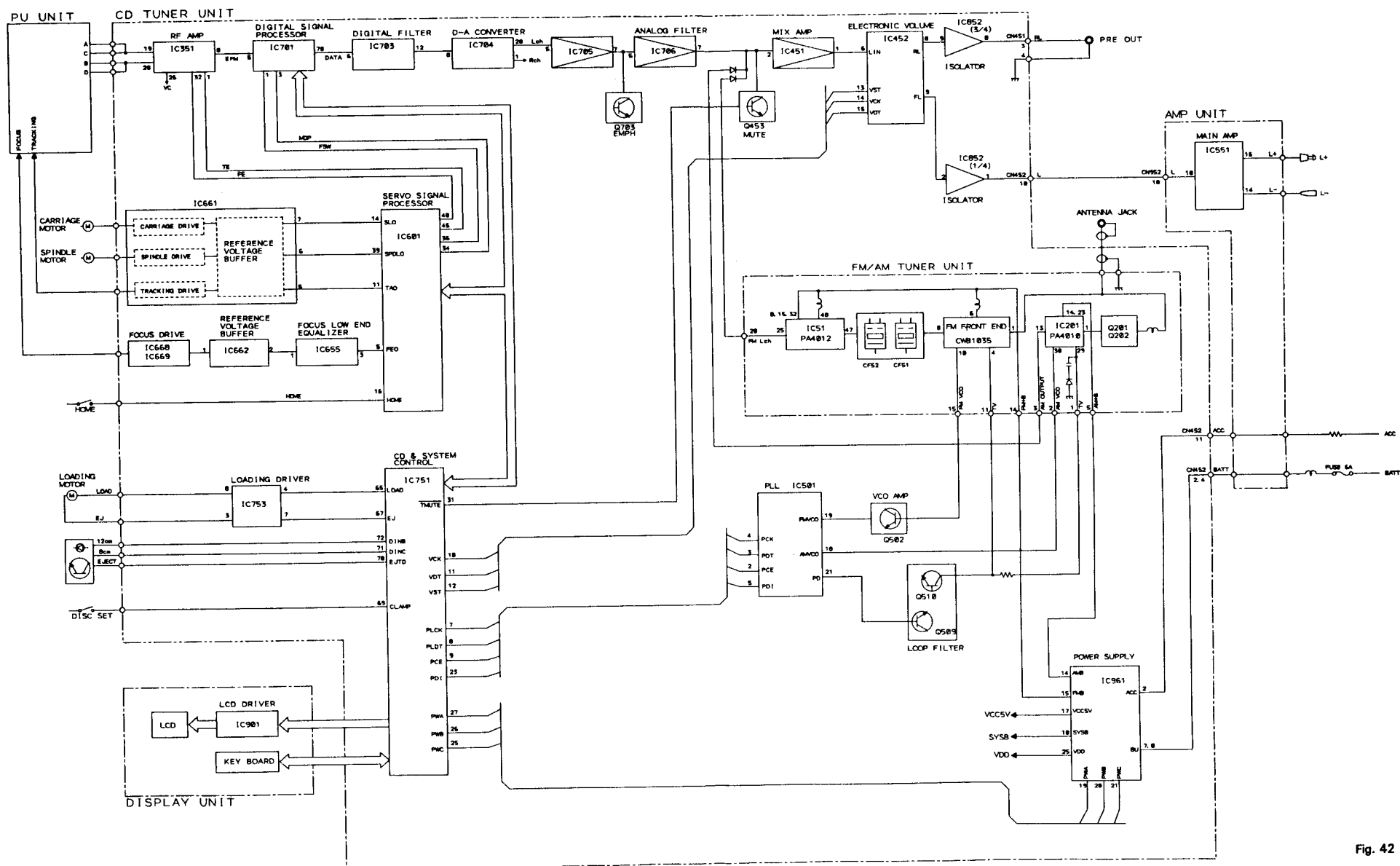
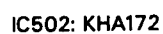
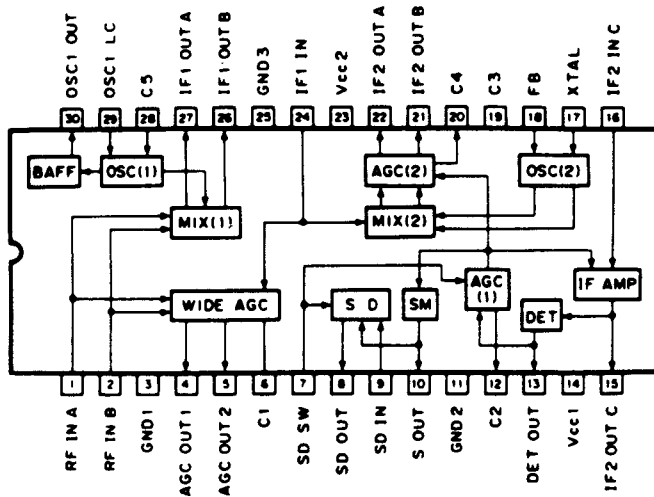


Fig. 42

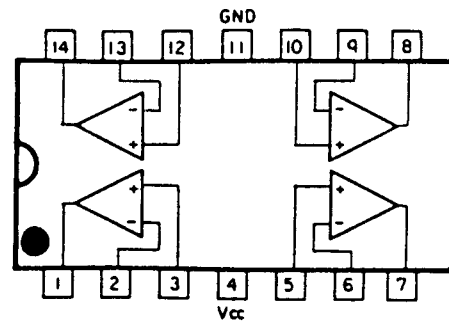
IC51: PA4012



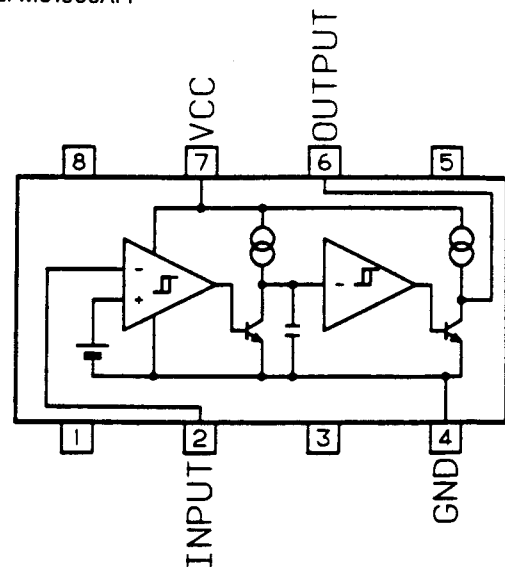
IC201: PA4010



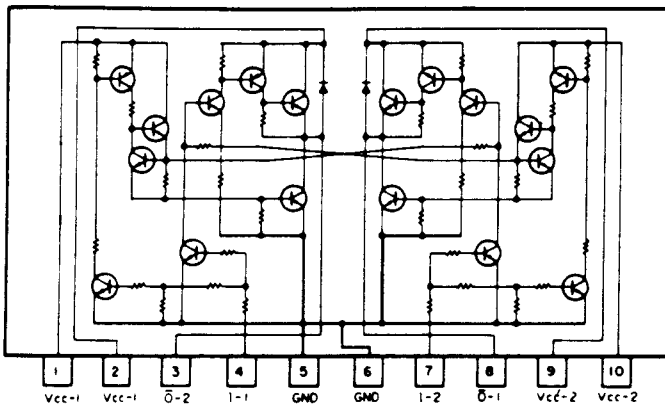
IC852: M5228FP



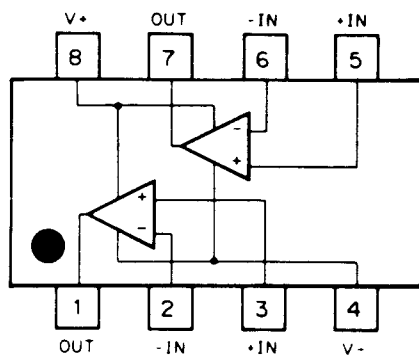
IC752: M51955AFP



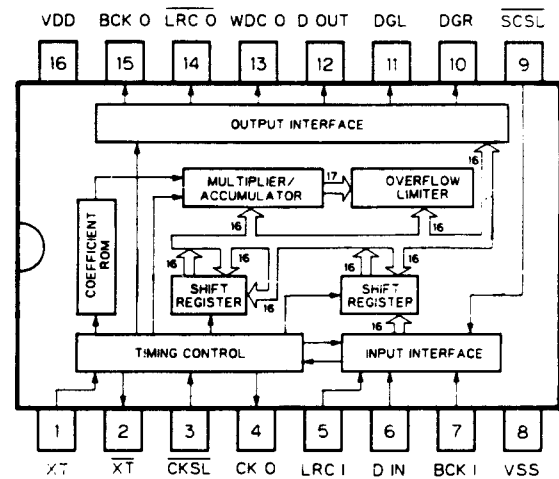
IC753: M54546AL



IC451, 655, 657, 662, 706, 851: M5218FP
IC705: UPC358G2



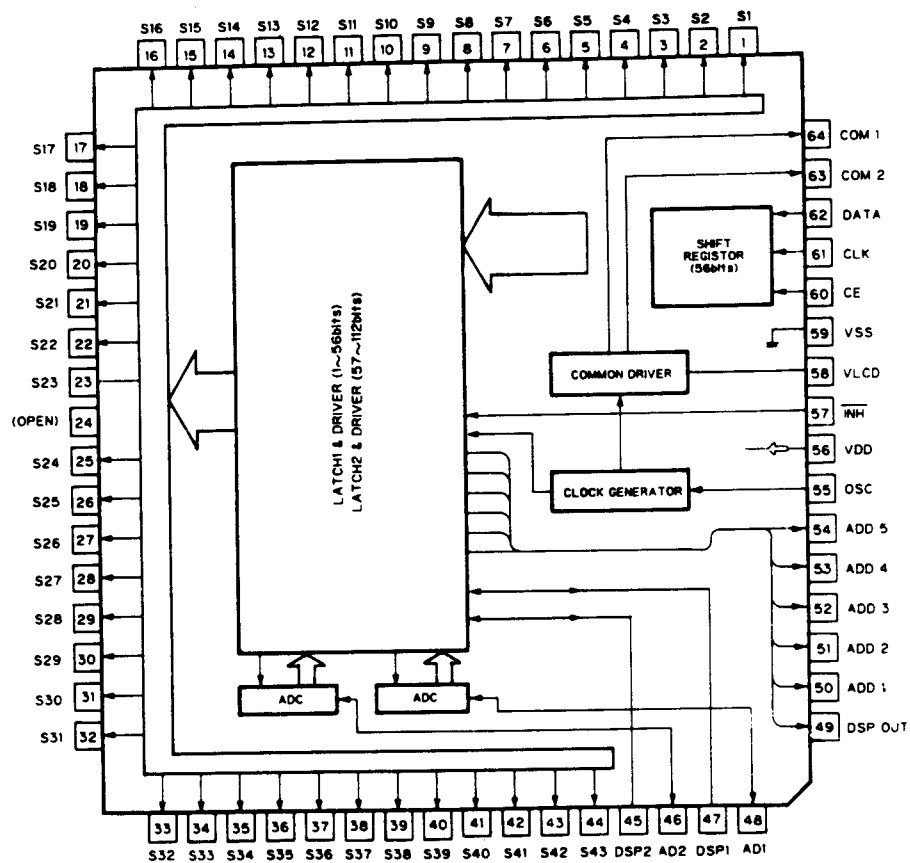
IC703: SM5807ES-M



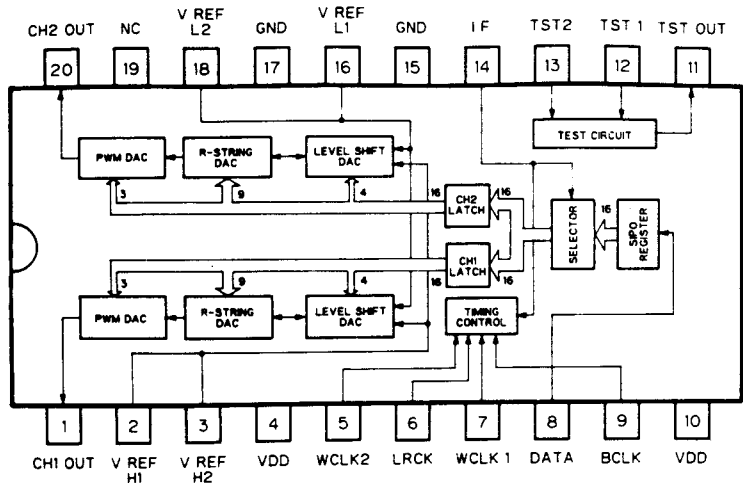
• Pin Functions (SM5807ES-M)

Pin	Pin name	I/O	Function and Operation
1	XT	input	Oscillator input
2	XT	output	Oscillator output
3	CKSL		"H": XT ← 16.93MHz input
4	CKO	output	Clock output
5	LRCI		44.1kHz synchronization clock input
6	DIN		Serial data input
7	BCKI		Bit clock input (Serial input)
8	VSS		GND
9	SCSL		System clock switching. "H": 192fs (fs: Sampling frequency)
10	DGR	output	R-ch digridge signal (176.4kHz)
11	DGL	output	L-ch digridge signal (176.4kHz)
12	DOUT	output	Serial data output
13	WDCO	output	Output control clock (352.8kHz)
14	LRCO	output	Output control clock (176.4kHz)
15	BCKO	output	Bit clock output (Serial output)
16	VDD		Power supply (5V)

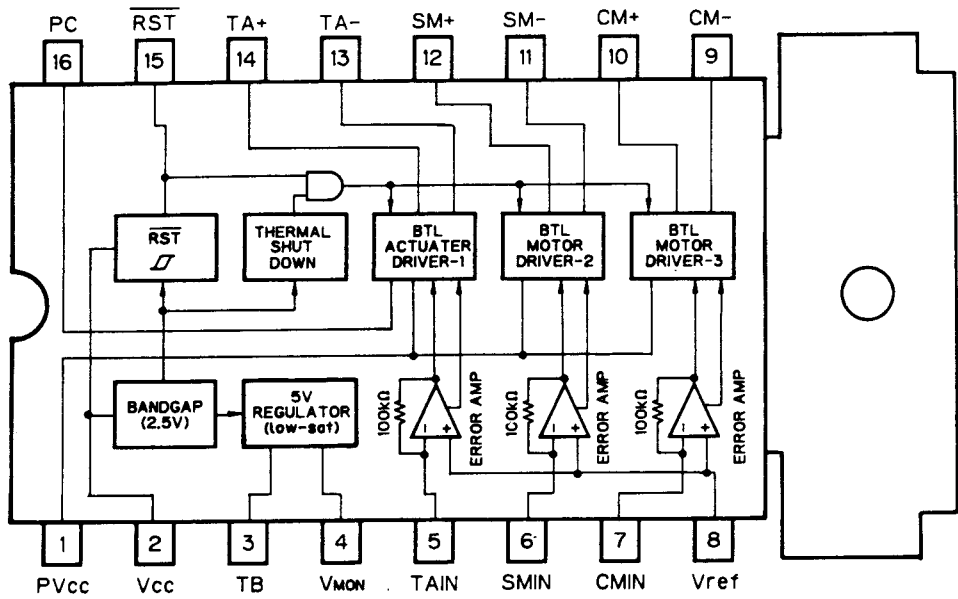
IC901: LC7582A



IC704: LC7881MBM



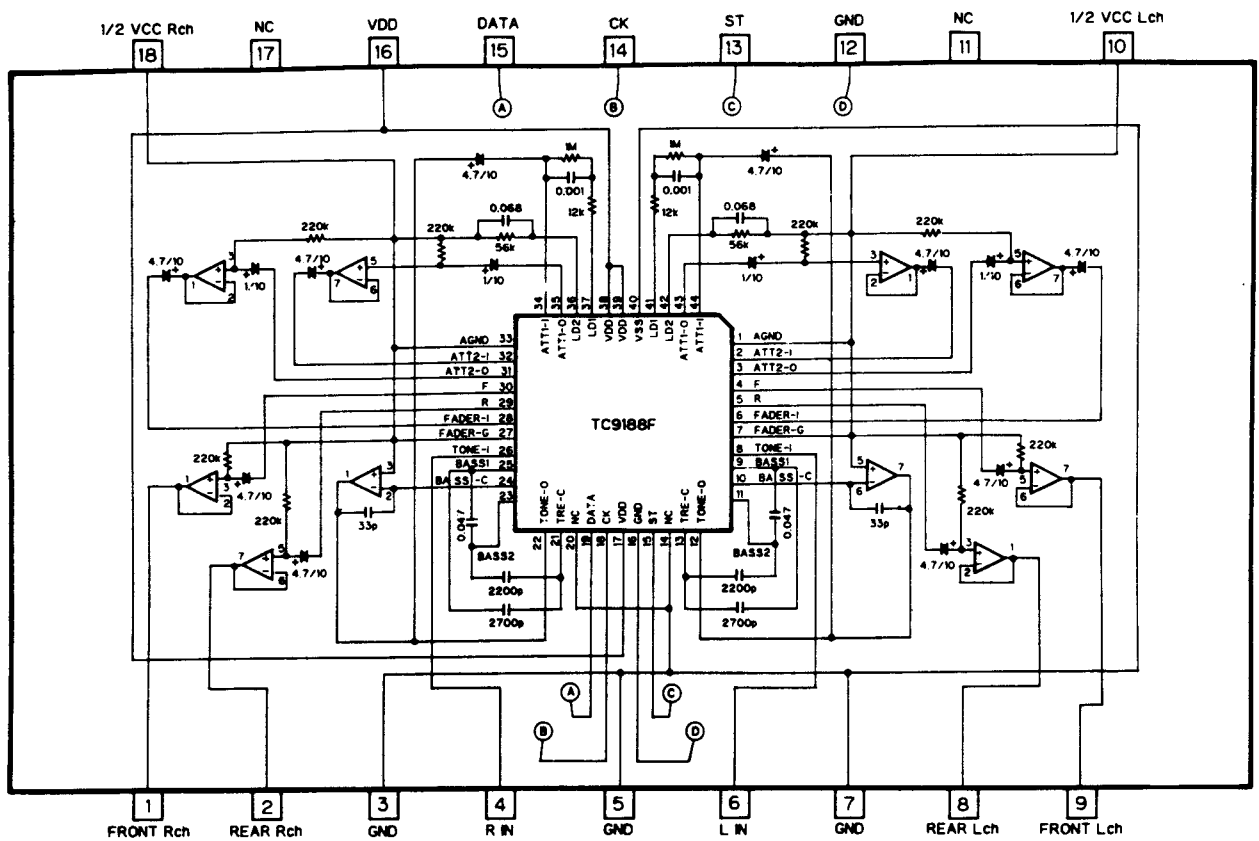
IC651: AN8377N



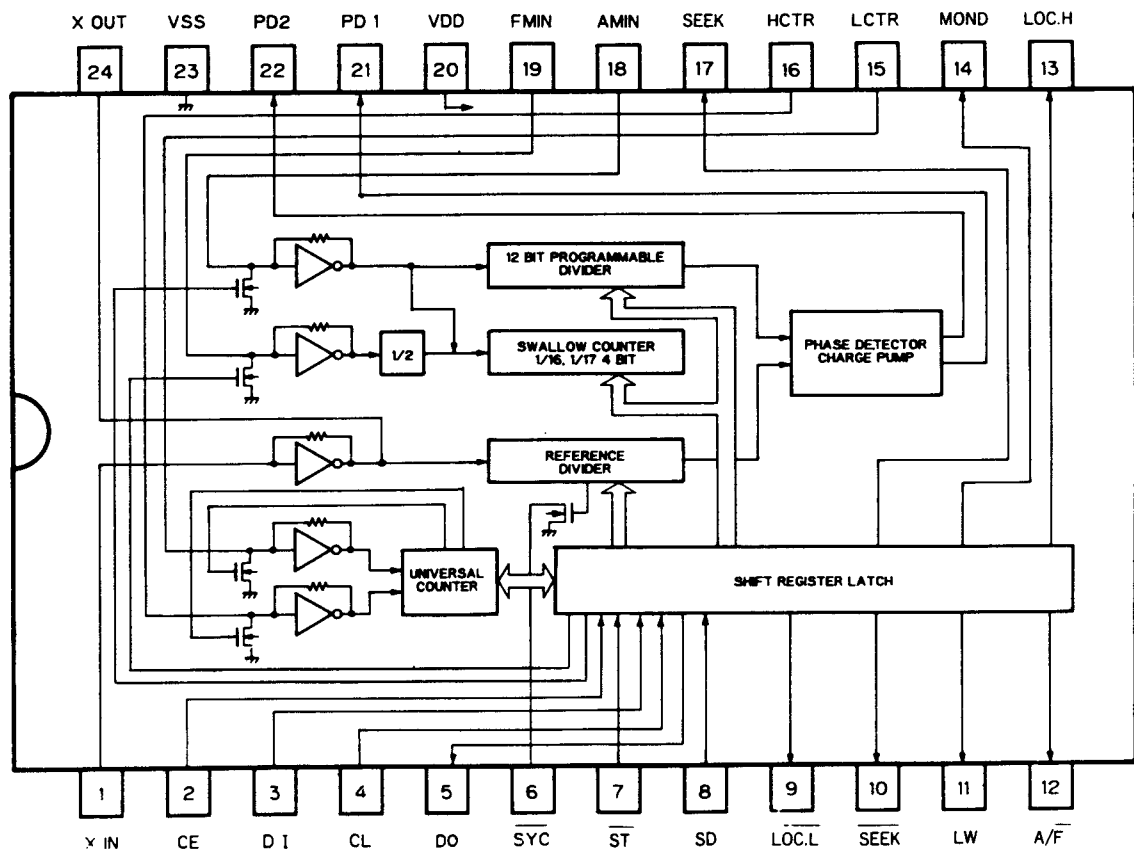
• Pin Functions (AN8377N)

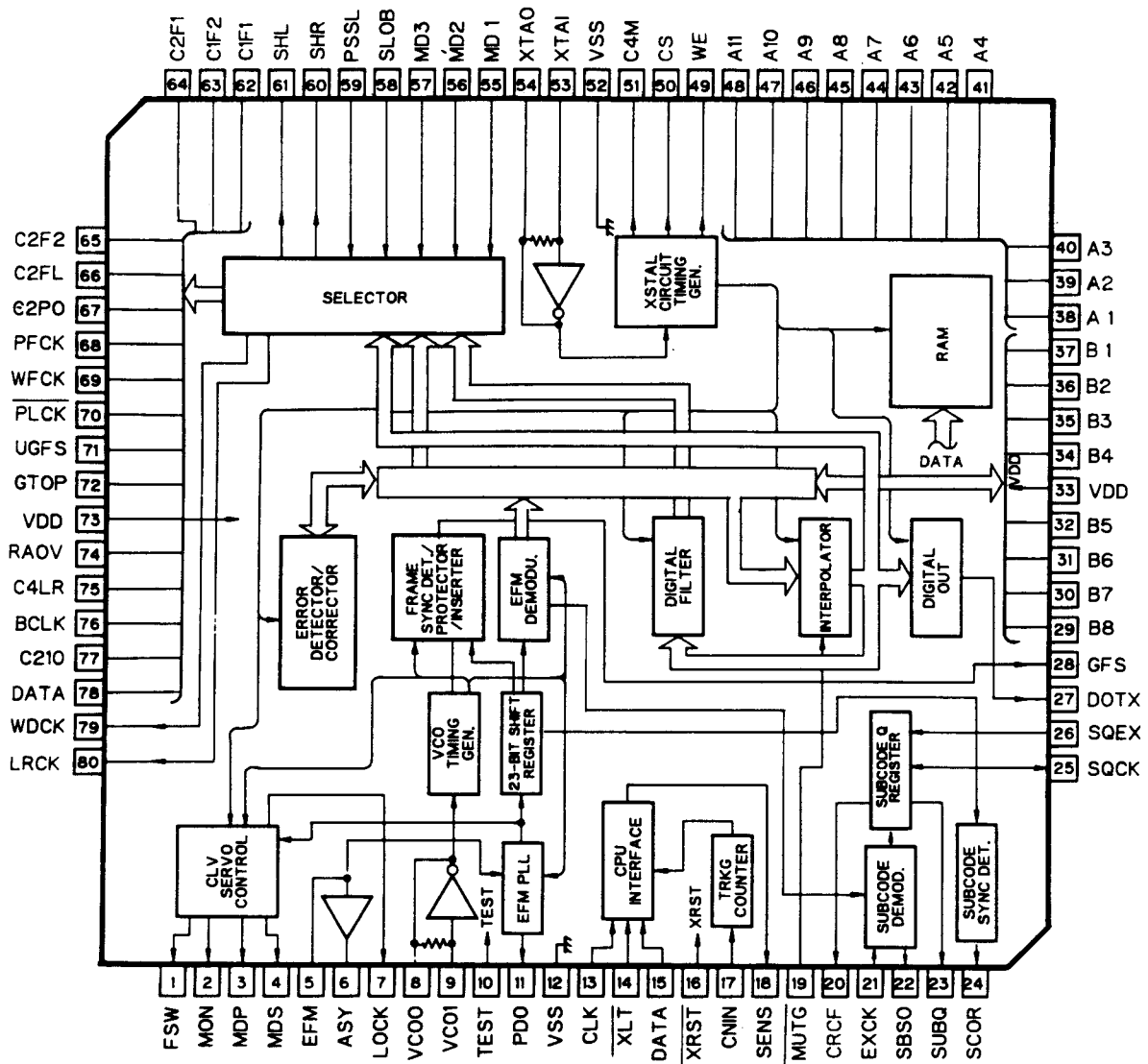
Pin	Pin name	I/O	Function and Operation
1	PVCC		Driver power supply
2	VCC		Power supply
3	TB	input	Transistor base input
4	VMON	output	5V regulator output
5	TAIN	input	Actuator driver 1 error input
6	SMIN	input	Motor driver 2 error input
7	CMIN	input	Motor driver 3 error input
8	VREF	input	Vref input
9	CM-	output	Motor driver 3 · inverter output
10	CM+	output	Motor driver 3 · non-inverting output
11	SM-	output	Motor driver 2 · inverter output
12	SM+	output	Motor driver 2 · non-inverting output
13	TA-	output	Actuator driver 1 · inverter output
14	TA+	output	Actuator driver 1 · non-inverting output
15	RST	output	Reset output
16	PC		PC input

IC452: CWW1213



IC501: LC7218M

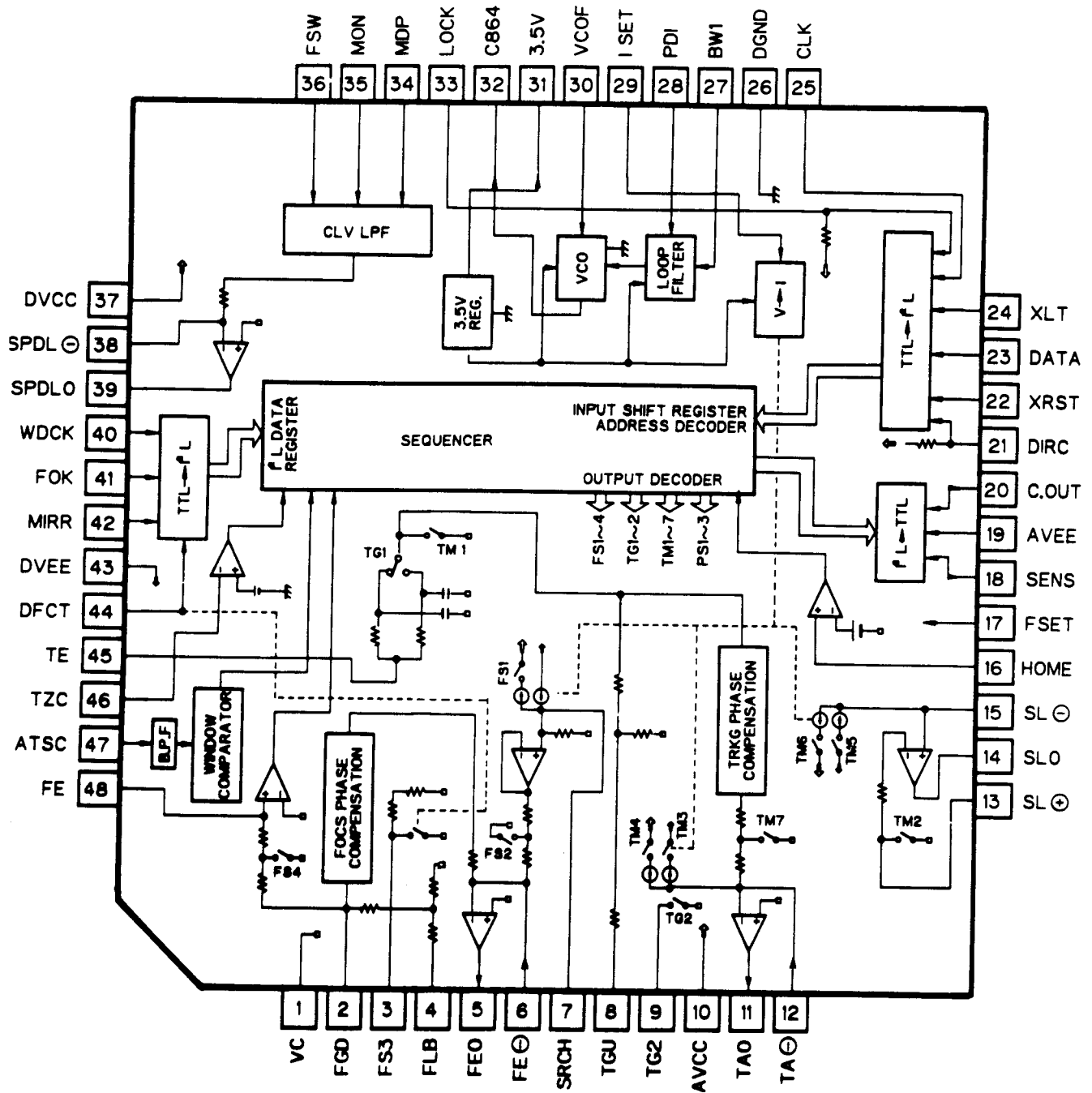




● Pin Functions (CXD1167Q)

Pin No.	Pin Name	I/O	Function and Operation
1	FSW	Output	Spindle motor output filter time constant selector output
2	MON	Output	Spindle motor ON/OFF control output
3	MDP	Output	Spindle motor drive output - "rough" control in CLV-S mode, and phase control in CLV-P mode
4	MDS	Output	Spindle motor drive output - speed control in CLV-P mode
5	EFM	Input	EFM signal input from RF amplifier
6	ASY	Output	EFM signal slice level control output
7	LOCK	Output	Sampling of GFS signal by WFCK/16 - "H" output if "H", "L" output if "L" detected eight times in succession
8	VCOO	Output	VCO output - $f = 8.6436\text{MHz}$ when EFM signal is locked
9	VCOI	Input	VCO input
10	TEST	Input	(0V)
11	PDO	Output	EFM signal and VCO/2 phase comparison output
12	V _{SS}	—	Ground (0V)
13	CLK	Input	Serial data transfer clock input from CPU - data latched by clock leading edge
14	XLT	Input	Latch input from CPU - 8-bit shift register data (serial data from CPU) is latched in each register.
15	DATA	Input	Serial data input from CPU
16	XRST	Input	System reset signal input - reset when "L"
17	CNIN	Input	Tracking pulse input
18	SENS	Output	Output of internal status according to address
19	MUTG	Input	Muting input - when ATTM of internal register A is "L", MUTG "L" denotes normal status, and "H" muted status
20	CRCF	Output	Sub-code Q CRC check result output
21	EXCK	Input	Clock input for sub-code serial output
22	SBSO	Output	Sub-code serial output
23	SUBQ	Output	Sub-code Q output
24	SCOR	Output	Sub-code synchronizing S0 + S1 output
25	SQCK	Input/Output	Sub-code Q read clock
26	SQEX	Input	SQCK selector input
27	DOTX	Output	Digital out output ($\overline{\text{WFCK}}$ output)
28	GFS	Output	Frame synchronizing lock status indicator output
29	B8	Input	Connected to GND
30	B7	Input	Connected to GND
31	B6	Input	Connected to GND
32	B5	Input	Connected to GND
33	V _{DD}	—	Power supply (+5V)
34	B4	Input	Connected to GND
35	B3	Input	Connected to GND

Pin No.	Pin Name	I/O	Function and Operation
36	B2	Input	Connected to GND
37	B1	Input	Connected to GND
38	A1	Input	Connected to GND
39	A2	Input	Connected to GND
40	A3	Input	Connected to GND
41	A4	Input	Connected to GND
42	A5	Input	Connected to GND
43	A6	Input	Connected to GND
44	A7	Input	Connected to GND
45	A8	Input	Connected to GND
46	A9	Input	Connected to GND
47	A10	Input	Connected to GND
48	A11	Input	Connected to GND
49	WE	Output	External RAM write enable signal output (active "L")
50	CS	Output	External RAM chip select signal output (active "L")
51	C4M	Output	X'tal frequency division output (f = 4.2336MHz)
52	V _{SS}	—	Ground (0V)
53	XTAI	Input	Crystal oscillator Input
54	XTAO	Output	Crystal oscillator output
55	MD1	Input	Mode selector input 1
56	MD2	Input	Mode selector input 2
57	MD3	Input	Mode selector input 3
58	SLOB	Input	Audio data output code selector input - 2's complement output "L", offset binary output if "H"
59	PSSL	Input	Audio data output mode selector input - serial output if "L", parallel output if "H"
60	SHR	Output	Aperture correction control output - "H" when right channel
61	SHL	Output	Aperture correction control output - "L" when left channel
62	C1F1	Output	C1F1 output
63	C1F2	Output	C1F2 output
64	C2F1	Output	C2F1 output
65	C2F2	Output	C2F2 output
66	C2FL	Output	C2FL output
67	C2PO	Output	C2PO output
68	RFCK	Output	RFCK output
69	WFCK	Output	WFCK output
70	$\overline{\text{PLCK}}$	Output	$\overline{\text{PLCK}}$ output
71	UGFS	Output	UGFS output
72	GTOP	Output	GTOP output

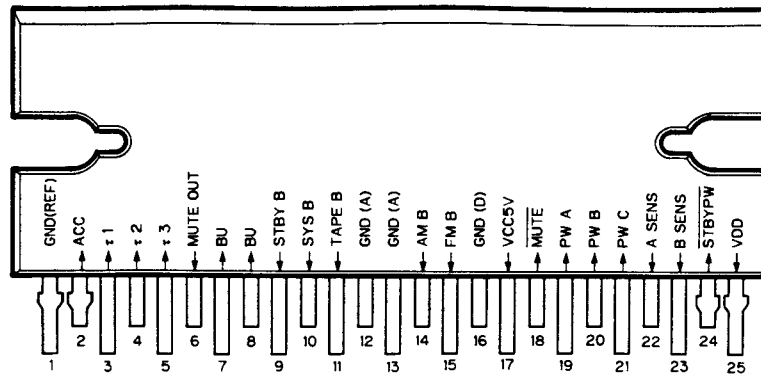


● Pin Functions (CXA1082BQ)

Pin No.	Pin Name	I/O	Function and Operation
1	VC		Servo reference voltage input pin
2	FGD		Connect to pin 3 to switch focus servo OFF when defect occurs
3	FS3		Internal DFCT switch closed when pin 44 is high
4	FLB		Focus servo low region boost external time constant pin
5	FEO	Output	Focus drive output - connect to low-end equalizer
6	FE -	Input	Focus amplifier inverter input pin
7	SRCH		Focus search waveform generation external time constant connector pin
8	TGU	Output	Tracking low-end equalizer connection output pin
9	TG2		Pin 7 discharge switch for starting focus search from lens center
10	AVCC		+ 5V connection
11	TAO	Output	Tracking drive output
12	TA -	Input	Tracking amplifier inverter input pin
13	SL +	Input	Sled amplifier non-inverting input pin
14	SLO	Output	Sled drive output
15	SL -	Input	Sled amplifier inverter input pin
16	HOME	Input	Sled home position detector switch input pin
17	FSET		Focus/tracking phase compensation peak and CLV low-pass filter f_0 setting pin
18	SENS	Output	Output of FZC, AS, TZC, SSTOP, and BUSY depending on command from CPU
19	AVEE		AGND connection
20	COUT	Output	Track counter signal output
21	DIRC		Not used
22	XRST	Input	Reset input pin - reset when "L"
23	DATA	Input	Serial data input from CPU
24	XLT	Input	Latch input from CPU
25	CLK	Input	Serial data transfer clock input from CPU
26	DGND		DGND connection
27	BW1		Loop filter external time constant pin
28	PDI	Input	Input of CXD1135 phase comparator output PDO
29	ISSET		Current which determines focus search, track jump, and sled kick height
30	VCOF		VCO free-running frequency more or less inversely
31	3.5V	Output	Proportional to resistance value between pins 30 and 31
32	C864	Output	8.64MHz VCO output pin
33	LOCK		Not used
34	MDP		Connect to MDP pin of CXD1135
35	MON		Connect to MON pin of CXD1135
36	FSW		CLV servo error signal low-pass filter external time constant pin
37	DVCC		+ 5V connection
38	SPDL -	Input	Spindle drive amplifier inverter input pin

● Pin Functions (CXA1081Q)

Pin No.	Pin. Name	I/O	Function and Operation
1	TE	Output	Tracking error amplifier output pin
2	DEFECT	Output	DEFECT comparator output pin
3	MIRR	Output	MIRR comparator output pin
4	CP	Input	MIRR hold capacitor connector pin - MIRR comparator non-inverting input pin
5	CB	Input	DEFECT bottom hold capacitor connector pin
6	DGND		Ground connection
7	ASY	Input	Auto asymmetry control input pin
8	EFM	Output	EFM comparator output pin
9	FOK	Output	Focus OK comparator output pin
10	LDON	Input	Laser diode ON/OFF switching
11	VCC		Positive power supply pin
12	NC		
13	RFI	Input	Input of capacitance-coupled RF summing amplifier output
14	RFO	Output	RF summing amplifier output pin - eye pattern check point
15	RF -	Input	RF summing amplifier feedback input pin
16	P/N	Input	Laser diode P-sub/N-sub selector pin
17	LD	Output	APC LD amplifier output pin
18	PD	Input	APC PD amplifier input pin
19	PD1	Input	RF I-V amplifier (1) inverter input pin - connected to photodiode A + C pin for current input
20	PD2	Input	RF I-V amplifier (2) inverter input pin - connected to photodiode B + D pin for current input
21	VC		Connected to VR
22	F	Input	I-V amplifier inverter input pin - connected to photodiode for current input
23	E	Input	I-V amplifier inverter input pin - connected to photodiode for current input
24	EO	Output	E I-V amplifier output pin
25	EI	Input	E I-V amplifier feedback input for E I-V amplifier gain adjustment
26	VR	Output	$(V_{CC} + V_{EE})/2$ DC voltage output pin
27	TEST		Open
28	CC2	Input	Input of capacitance-coupled DEFECT bottom hold output
29	CC1	Output	DEFECT bottom hold output pin
30	VEE		Ground connection
31	FE BIAS	Input	Focus error amplifier non-inverting bias pin Used in focus error amplifier CMR adjustment
32	FE	Output	Focus error amplifier output pin



• Pin Functions (PA2018)

Pin No.	Pin Name	I/O	Function and Operation
1	GND		GND (ref) Reference GND
2	ACC	Input	Connected to accessory power supply of a car
3	$\tau 1$	Input	Connected with external capacity for VDD backup
4	$\tau 2$	Input	Connected with external capacity and used for setting of the operation time of the overcurrent protective function
5	$\tau 3$	Input	Connected with external capacity and used for setting of the delay time of MUTE OUT
6	MUTEOUT	Output	MUTE circuit control output
7	BU	Input	Connected to car backup power supply
8	BU	Input	Connected to car backup power supply
9	STBYB	Output	Power amplifier control signal output
10	SYSB	Output	Stabilized power output for circuits (sound quality, sound volume, balance, etc.) common to the system
11	TAPEB	Output	Stabilized power output for cassette deck circuit (equalizer amplifier, etc.)
12	GND(A)		Analog GND
13	GND(A)		Analog GND
14	AMB	Output	Stabilized power output for AM tuner circuit
15	FMB	Output	Stabilized power output for FM tuner circuit
16	GND(D)	Output	Digital GND
17	VCC5V	Output	Stabilized power output used for microcomputer interface circuit
18	MUTE	Input	MUTE control input from the outside (MUTE OUT at H for input of L)
19	PWA	Input	Input for output selection, which controls the output with three bit signals of PWA, PWB, and PWC
20	PWB	Input	
21	PWC	Input	
22	ASENS	Output	ACC line voltage detection output (H for voltage detection)
23	BSENS	Output	BU line voltage detection output (H for voltage detection)
24	STBYPW	Output	Terminal for internal circuit which is connected with external capacity
25	VDD	Output	Stabilized power output for microcomputer, with backup and overcurrent protection functions

DECODER LOGIC (PA2018)

INPUT			OUTPUT			
Pin 19 PWA	Pin 20 PWB	Pin 21 PWC	Pin 10 SYSB	Pin 11 TAPEB	Pin 15 FMB	Pin 14 AMB
L	L	L	OFF	OFF	OFF	OFF
L	L	H	ON	OFF	OFF	ON
L	H	L	ON	OFF	ON	OFF
L	H	H	ON	OFF	OFF	OFF
H	L	L	ON	ON	OFF	OFF
H	L	H	ON	ON	OFF	ON
H	H	L	ON	ON	ON	OFF
H	H	H	ON	ON	ON	ON

• Detection of voltage

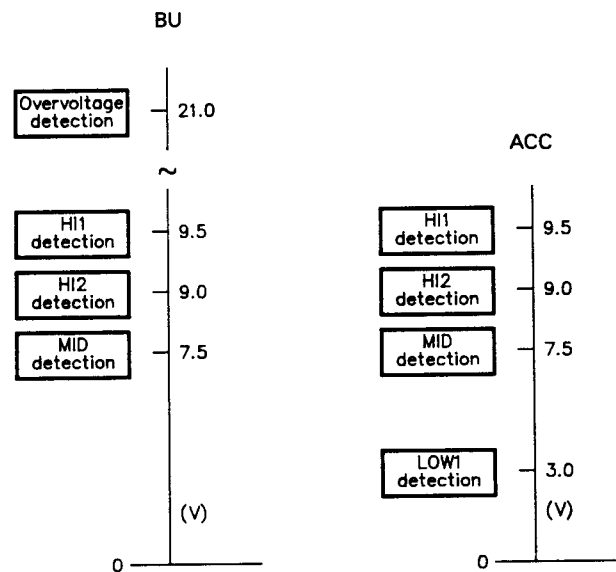


Fig. 43

- | | |
|--|---|
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">HI1 detection</div> <ol style="list-style-type: none"> 1. MUTE operation stop control | <div style="border: 1px solid black; padding: 2px; display: inline-block;">LOW1 detection</div> <ol style="list-style-type: none"> 1. MUTE operation control 2. Control of low current consumption mode |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">HI2 detection</div> <ol style="list-style-type: none"> 1. MUTE operation start control 2. Audio system power output start control | <div style="border: 1px solid black; padding: 2px; display: inline-block;">Overvoltage detection</div> <ol style="list-style-type: none"> 1. Control of outputs other than VDD |
| <div style="border: 1px solid black; padding: 2px; display: inline-block;">MID detection</div> <ol style="list-style-type: none"> 1. Control of operation of microcomputer and control systems 2. Audio system power output stop control | |

• **Output from power IC (PA2018) to microcomputer system**

- 1) VDD: Normally output according to the voltage of $\tau 1$
- 2) VCC: Output when BU is above the MID detection voltage and ACC is above the MID detection voltage.

<VCC output requirements>

$BU \geq \text{MID detection}$ $ACC \geq \text{MID detection}$

- 3) A sens: H output when BU is above the MID detection voltage and ACC is above the MID detection voltage.

L output when above requirements are not met

<A sens H-output requirements>

$BU \geq \text{MID detection}$ $ACC \geq \text{MID detection}$

- 4) B Sens: H output when BU is above the MID detection voltage

L output when the above requirement is not met

<B sens H-output requirement>

$BU \geq \text{MID detection}$

• **Output from power IC (PA2018)**

- 1) SYSB, TAPEB, FMB, AMB:

Hysteresis operation (See the figure below)

ON with HI2 detection voltage and OFF with MID detection voltage

ON: When BU is above the HI2 detection voltage and ACC is above the HI2 detection voltage and when any one of inputs (A, B, and C) for output selection is H

<ON requirements>

$BU \geq \text{HI2 detection}$ $ACC \geq \text{HI2 detection}$ $A \text{ or } B \text{ or } C = H$
--

OFF: When BU is less than the MID detection voltage or ACC is less than the MID detection voltage or when all of inputs (A, B, and C) for output selection are L

<OFF requirements>

$BU < \text{MID detection}$
$ACC < \text{MID detection}$
$A \text{ and } B \text{ and } C = L$

- * For the output state of inputs (A, B, and C) for output selection, refer to the attached material 1. Decoder Logic.

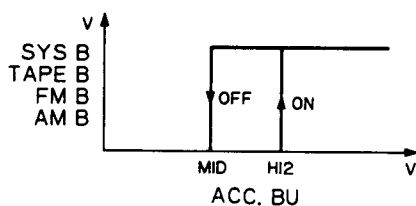


Fig. 44

- 2) STBY B: Output in synchronization with SYSB

- 3) MUTE OUT

Normal operation (See the figure below)

Hysteresis operation

ON with HI2 detection voltage and OFF with HI1 detection voltage

ON: ① When BU is less than the HI2 detection voltage and ACC is above the LOW1 detection voltage

or

when ACC is less than the HI2 detection voltage

and

ACC is above the LOW1 detection voltage

<ON requirements>

$BU < \text{HI2 detection}$ $ACC \geq \text{LOW 1 detection}$
--

$ACC < \text{HI2 detection}$ $ACC \geq \text{LOW1 detection}$
--

② When MUTE input is L

OFF: ① When BU is above the HI1 detection voltage and ACC is above HI1 detection voltage

② When ACC is less than the LOW1 detection voltage

<OFF requirements>

$BU \geq \text{HI1 detection}$ $ACC \geq \text{HI1 detection}$

$ACC < \text{LOW1 detection}$

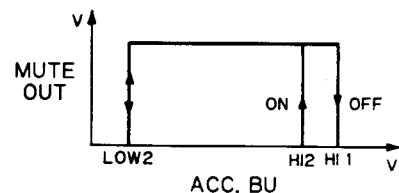


Fig. 45

Delay operation (See the figure below)

The time period during which either BU or ACC remains below the MID detection voltage is represented by "T". Two time periods determined from the external capacity of $\tau 3$ terminal are respectively represented by T3A and T3B.

① $T \geq T3B$

Delay MUTE OUT ON for a period from rise of BU and ACC above the MID detection voltage up to the end of T3A

② $T < T3B$

MUTE OUT not performing delay MUTE OUT up to the end of T3A in (1).

Operation time with the external capacity (condenser) connected to $\tau 3$:

T3A: about 30ms at 0.1μ

T3B: about 30ms at 0.1μ ($T3A = T3B$)

- * When L is input to the MUTE terminal, with MUTE OUT OFF and BU and ACC between HI1 and HI2 detection voltages, MUTE OUT is turned ON. When the MUTE terminal changes from L to H in this state, MUTE OUT remains ON. This ON state is canceled and MUTE OUT is turned OFF when BU and ACC rise above the HI1 detection voltage.

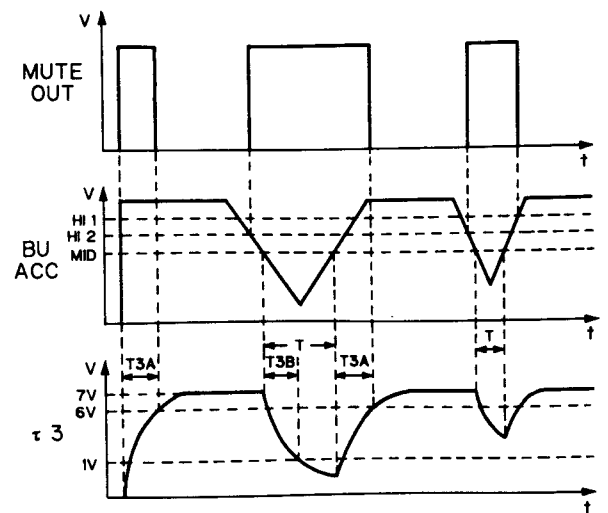
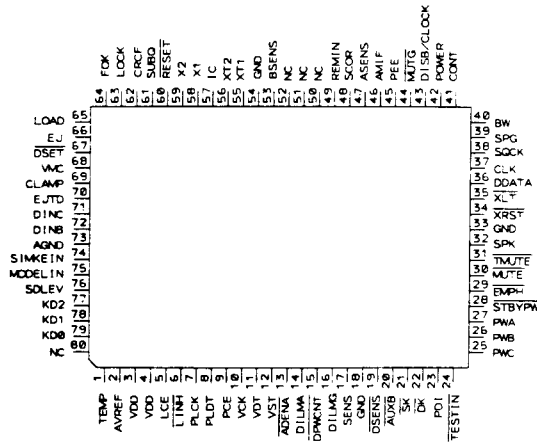


Fig. 46

• IC751: PD4231

IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.



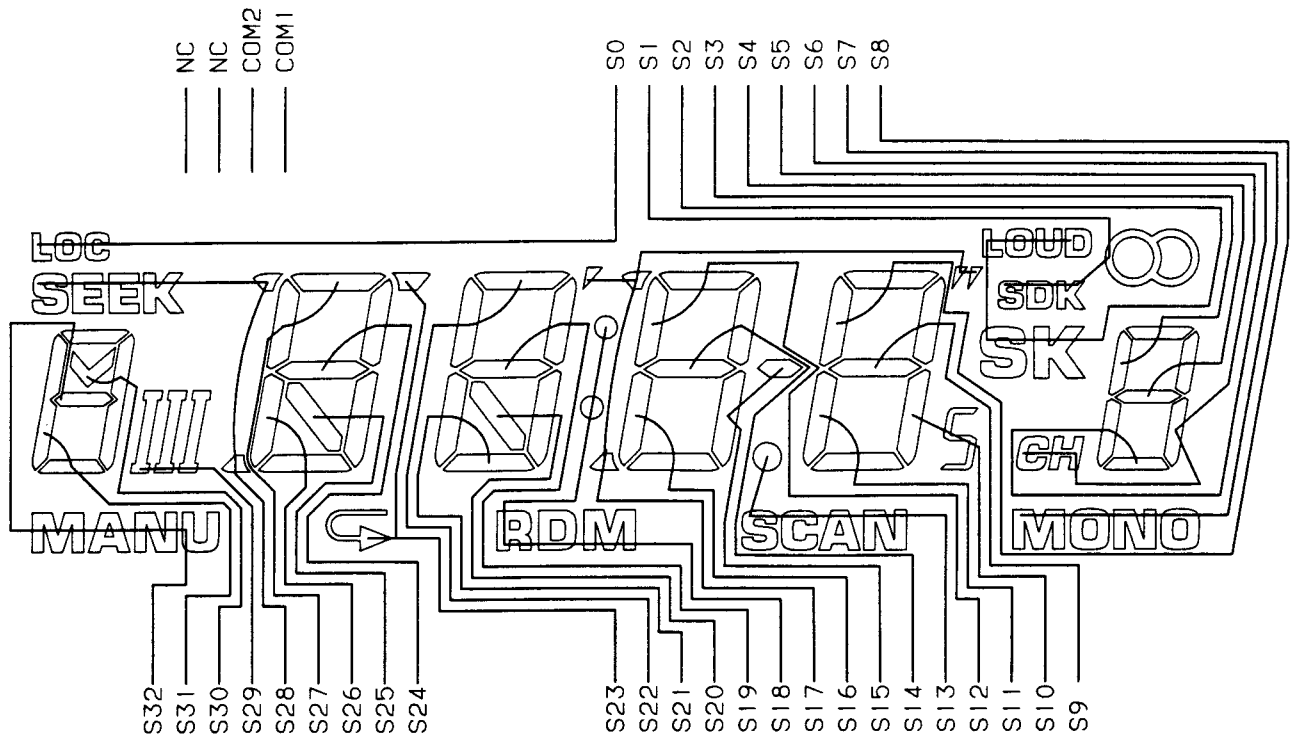
• Pin Functions (PD4231)

Pin No.	Pin Name	I/O	Output Format	Function and Operation	Standby	Reset
1	TEMP	Input		High-temperature stop detection/stop input L: HOT state		
2	AVREF	Input		A/D converter reference voltage H: A/D converter enable		
3	VDD			VDD		
4	VDD			VDD		
5	LCE	Output	C	IC901 (LC7582A) chip enable	L	HiZ
6	LINH	Output	C	IC901 (LC7582A) inhibit output	L	HiZ
7	PLCK	Output	C	PLL (IC501), LCD (IC901) common clock output	L	HiZ
8	PLDT	Output	C	PLL (IC501), LCD (IC901) common data output	L	HiZ
9	PCE	Output	C	IC501 (LC7218M) chip enable	L	HiZ
10	VCK	Output	C	IC901 (LC7582A) clock output	L	HiZ
11	VDT	Output	C	IC901 (LC7582A) data output	L	HiZ
12	VST	Output	C	IC901 (LC7582A) strobe output	L	HiZ
13	ADENA	Output	C	AVREF control output H: Standby	H	HiZ
14	DILMA	Output	C	Dual illumination amber output H: Amber lamp ON	Keep	HiZ
15	DPWCNT	Output	C	Grill power control output H: Standby/detach	H	HiZ
16	DILMG	Output	C	Dual illumination green output H: Green lamp ON	Keep	HiZ
17	SENS	Input		CD servo, Internal state monitor input for signal processing LSI		
18	GND			GND		
19	DSSENS	Input		Detach sense input	HiZ	HiZ
20	AUXB	Input		AUX input	HiZ	HiZ
21	SK	Input		SK signal input L: SK input provided	HiZ	HiZ
22	DK	Input		DK signal input L: DK input provided	HiZ	HiZ
23	PDI	Input		IC501 (LC7218M) data input	HiZ	HiZ
24	TESTIN	Input		Test mode input H: Normal	HiZ	HiZ
25	PWC	Output	C	Power IC (C961) power selection C output	L	HiZ
26	PWB	Output	C	Power IC (IC961) power selection B output		
27	PWA	Output	C	Power IC (IC961) power selection A output		

Pin No.	Pin Name	I/O	Output Format	Function and Operation	Standby	Reset
28	STBYPW	Output	C	Power IC (IC961) standby control output	L	HiZ
29	EMPH	Output	N _M	Emphasis selection output H: Emphasis ON	H	HiZ
30	MUTE	Output	N _M	Line mute output	RUP-H	HiZ
31	TMUTE	Output	N _M	Tuner mute output	RUP-H	HiZ
32	SPK	Output	N _M	Spindle kick control output H: Kicking, braking	L	HiZ
33	GND			GND		
34	XRST	Output	N _M	IC701 (CXD1167Q) reset output L: Reset	L	HiZ
35	XLT	Output	N _M	IC701 (CXD1167Q) serial data latch output	L	HiZ
36	DDATA	Output	N _M	IC701 (CXD1167Q) Serial data output	L	HiZ
37	CLK	Output	N _M	IC701 (CXD1167Q) Serial clock output	L	HiZ
38	SQCK	Output	N _M	Sub-code clock output	L	HiZ
39	SPG	Output	C	Spindle gain selection output L: 8cm, H: 12cm	L	HiZ
40	BW	Output	C	Spindle band selection output L: Searching H: Normal	H	HiZ
41	CONT	Output	C	PWM driver ON/OFF output H: ON	L	HiZ
42	POWER	Output	C	CD + 5V output H: CD power ON	L	HiZ
43	DISB/CLOCK	Output	C	AUX control output /for clock adjustment H: AUX inhibit	L	HiZ
44	MUTG	Output	C	IC701 (CXD1167Q) mute control output L: Mute ON	L	HiZ
45	PEE	Output	C	Key touch peep sound output	L	HiZ
46	AMIF	Input		AMIF count input		
47	ASENS	Input		ACC detection input L: ACC down	HiZ	HiZ
48	SCOR	Input		Sub-code sink input	HiZ	HiZ
49	REMIN	Input		Wireless remote control pulse input	HiZ	HiZ
50~52	NC					
53	BSENS	Input		BACK UP detection input L: BACK-UP DOWN	HiZ	HiZ
54	GND			GND		
55	XTI	Input		Blank, connected to GND		
56	XT2	Output		Blank		
57	IC			Connected to GND		
58	X1	Input		Oscillator input		
59	X2	Output		Oscillator output		
60	RESET			Reset		
61	SUBQ	Input		Sub-code data input	HiZ	HiZ
62	CRCF	Input		CR check input	HiZ	HiZ
63	LOCK	Input		Spindle lock detection input H: Lock	HiZ	HiZ
64	FOK	Input		Focus OK detection input	HiZ	HiZ
65	LOAD	Output	N _M	Loading motor control output	L	HiZ
66	EJ	Output	N _M	Loading motor driver control output H: Eject	L	HiZ
67	DSET	Output	N _M	Output for disk set LED	RUP-H	HiZ
68	VMC	Output	N _M	Loading motor driver power control output	L	HiZ
69	CLAMP	Input		Disk clamp end detection input L: Clamp over	HiZ	HiZ
70	EJTD	Input		Disk ejection end detection input L: Eject over	HiZ	HiZ
71	DINO	Input		Disk ejection detection C input	HiZ	HiZ

• LCD (CAW1074)

SEGMENT



COMMON

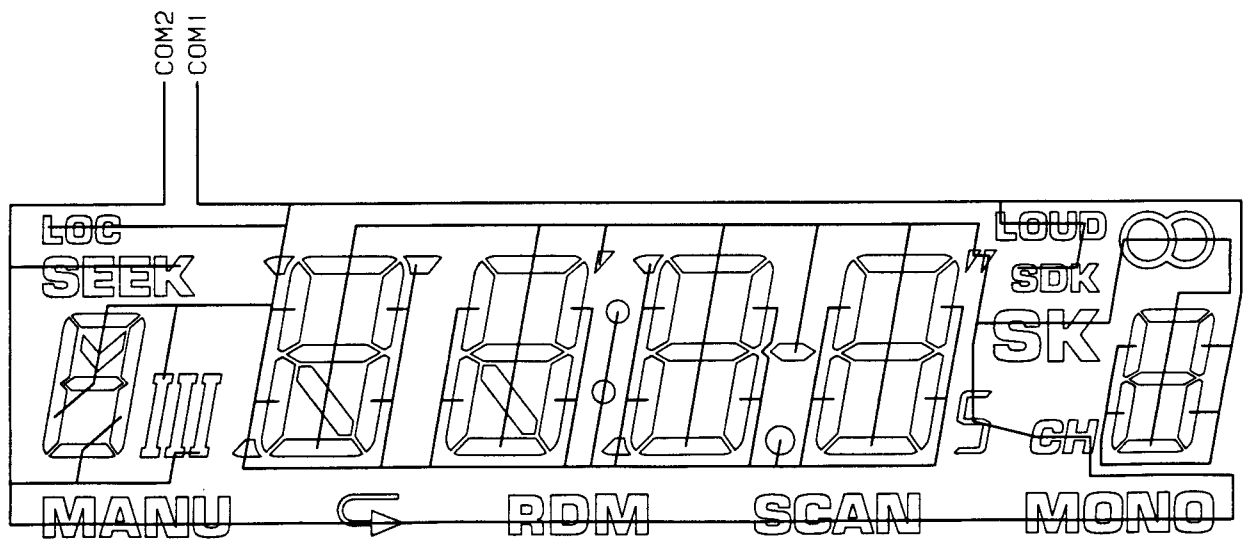
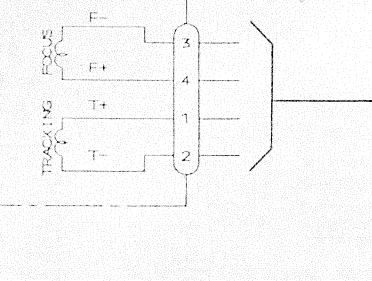
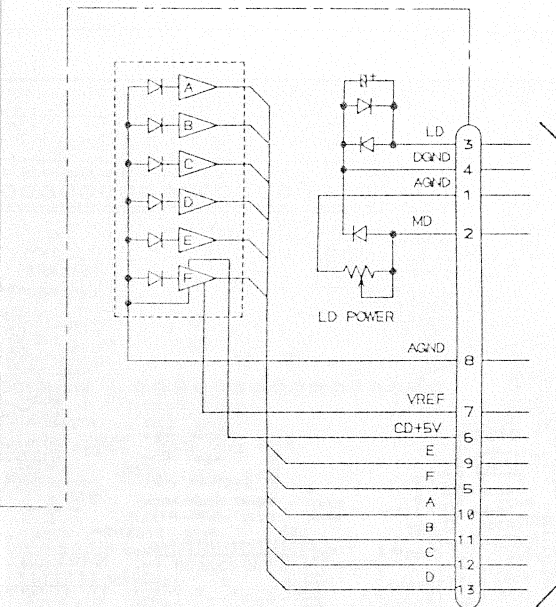


Fig. 47

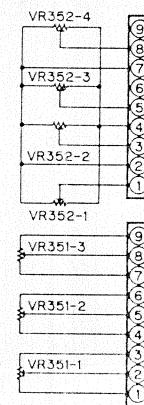
6



PU UNIT



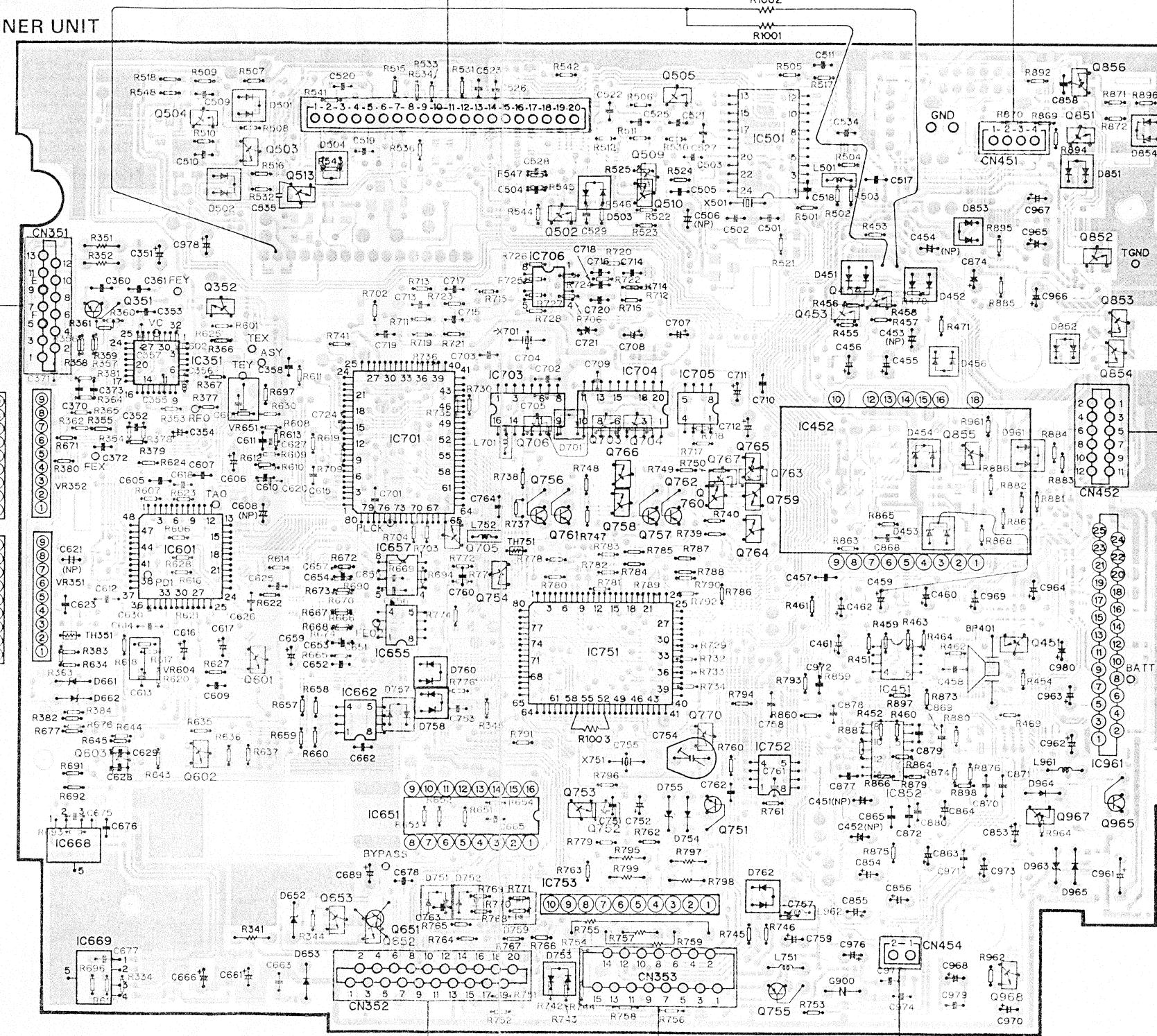
CD TUNER UNIT



TO FM/AM TUNER UNIT

TO PRE OUT CONNECTOR

TO AMP UNIT



ADJ IC. Q

- Q856
- Q505
- Q504 Q851
- Q503 IC501
- Q509
- Q510
- Q513
- Q502
- Q852
- IC706
- Q454 Q352
- Q453 Q351
- IC351 Q853
- Q854
- VR651
- IC705 IC703
- IC704 IC701
- VR352
- Q706 Q703 IC452
- Q704 Q765 Q763
- Q855 Q766 Q767
- Q759 Q758
- Q760 Q756 Q761
- Q764 Q757 Q762
- VR351
- IC601 Q705
- IC657 Q754
- VR604
- IC655
- Q451
- IC961
- IC451 Q601
- IC751
- IC662
- Q770
- IC852
- Q602 Q603
- IC752
- Q965
- Q967 Q753
- Q751 IC651
- Q752
- IC668
- IC753
- Q651
- Q653 Q652
- IC669
- Q968
- Q755

A

B

C

D

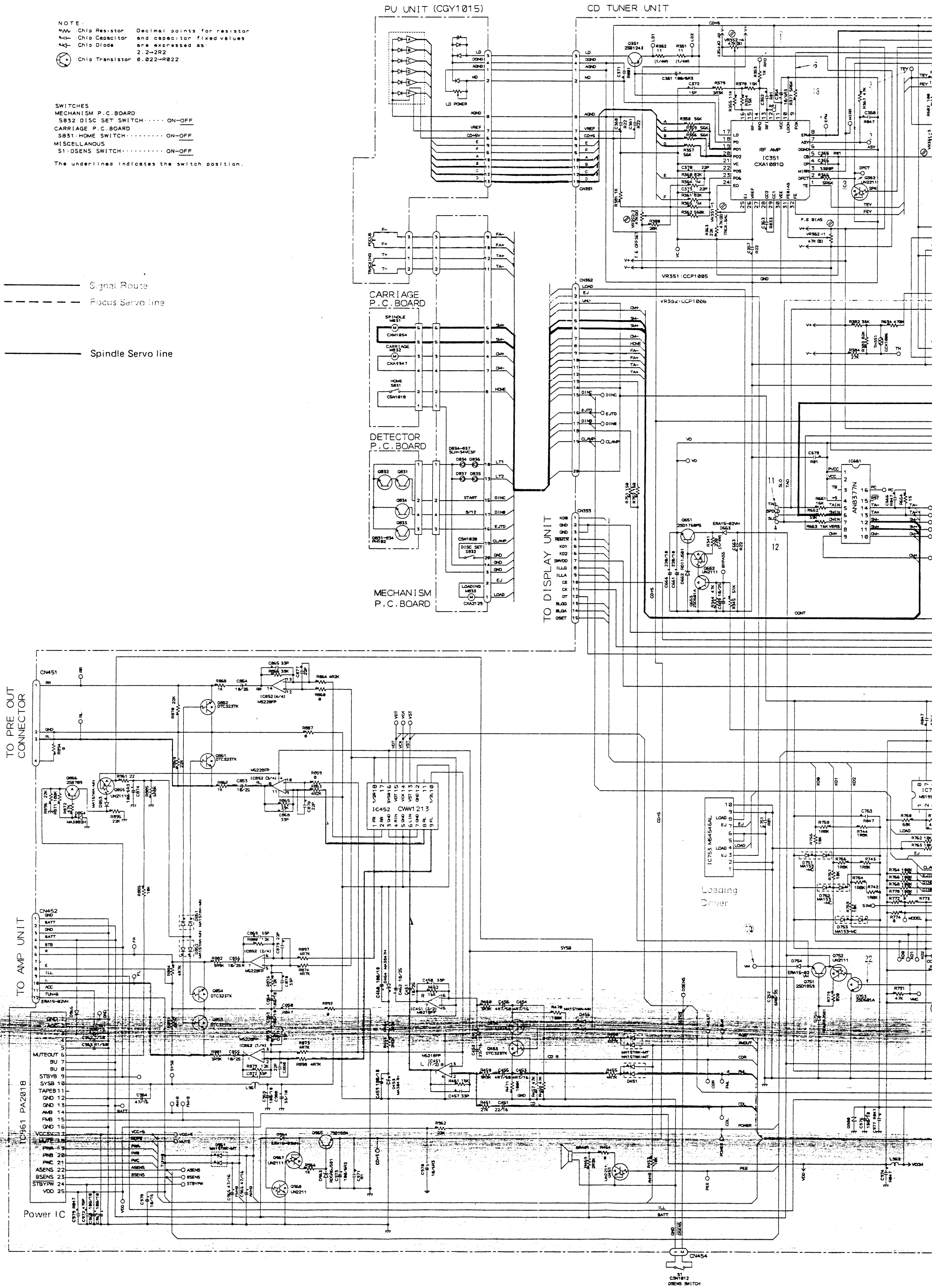
Fig. 48

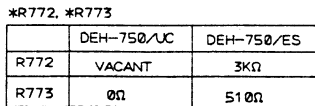
11. SCHEMATIC CIRCUIT DIAGRAM (DEH-750/UC, ES)

NOTE:
 Chip Resistor
 Chip Capacitor
 Chip Diode
 Chip Transistor
 Decimal points for resistor and capacitor fixed values are expressed as:
 2.2-2R2
 0.022-0R22

SWITCHES
 MECHANISM P.C. BOARD
 SB32 DISC SET SWITCH..... ON-OFF
 CARRIAGE P.C. BOARD
 SB31 HOME SWITCH..... ON-OFF
 MISCELLANEOUS
 S110SENS SWITCH..... ON-OFF
 The underlined indicates the switch position.

Signal Route
 Focus Servo line
 Spindle Servo line





12. SCHEMATIC CIRCUIT DIAGRAM (DEH-650/UC)

NOTE:
Chip Resistor Decimal points for resistor
Chip Capacitor and capacitor fixed values
Chip Diode are expressed as:
Chip Transistor 2.2-2R2
 0.022-R022

SWITCHES

MECHANISM P.C. BOARD

SB52 DISC SET SWITCH..... ON-OFF

CARRIAGE P.C. BOARD

SB31 HOME SWITCH..... ON-OFF

The underlined indicates the switch position.

Signal Route

Focus Servo line

PU UNIT (CGY1015)

CD TUNER UNIT

CARRIAGE P.C. BOARD

DETECTOR P.C. BOARD

MECHANISM P.C. BOARD

TO DISPLAY UNIT

Loading Driver

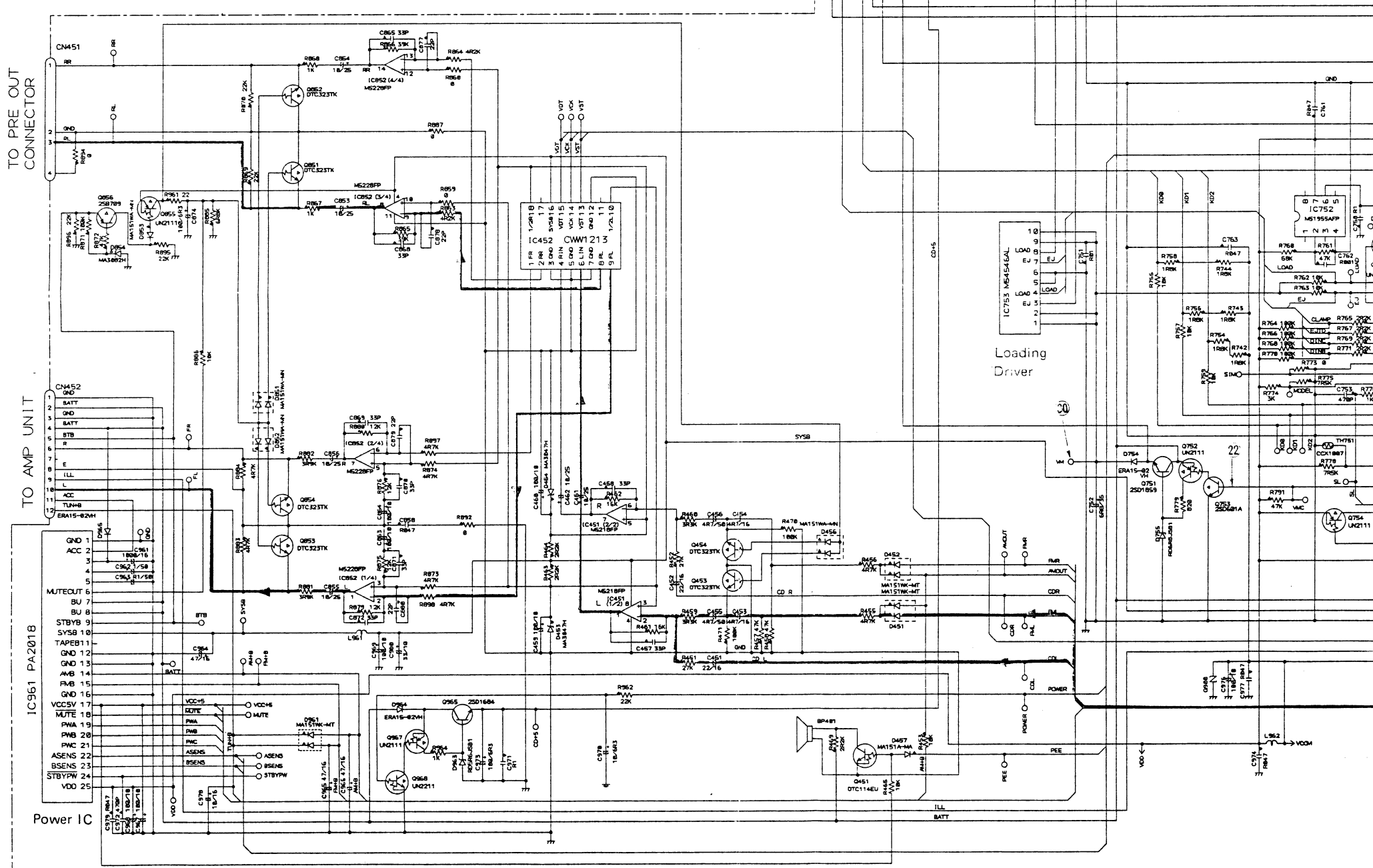




Fig. 50

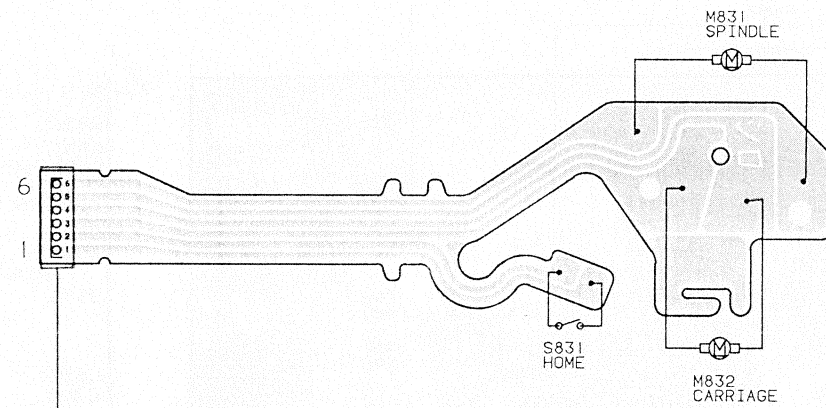
13.CONNECTION DIAGRAM (DEH-650/UC)

A

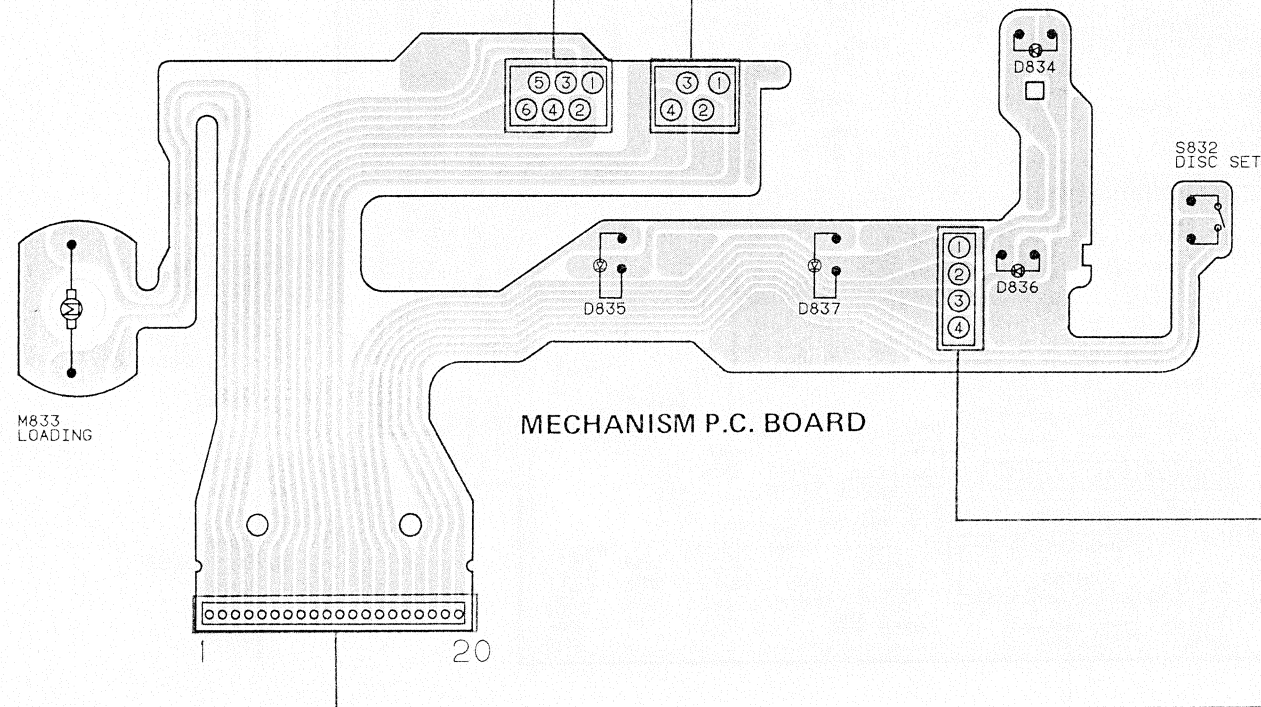
B

C

D

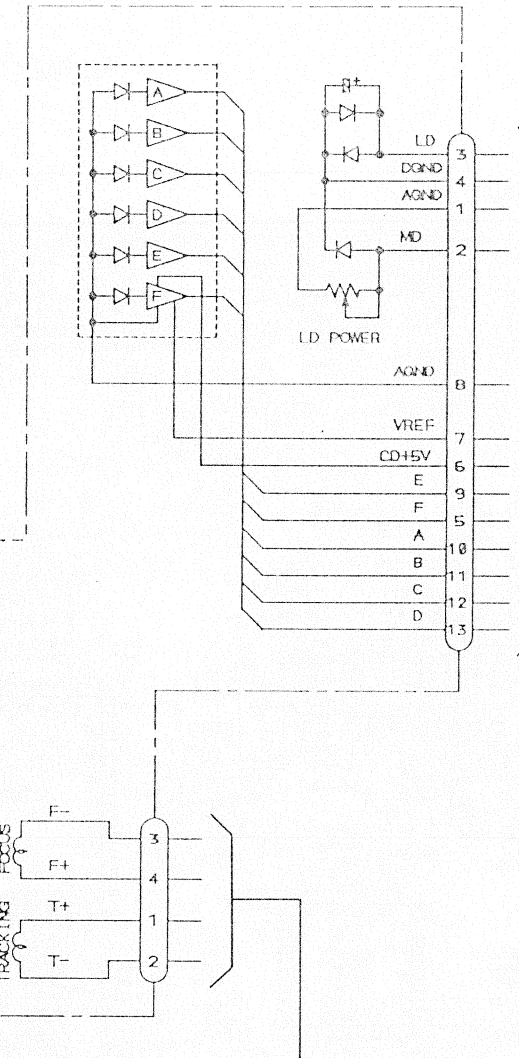


CARRIAGE P.C. BOARD

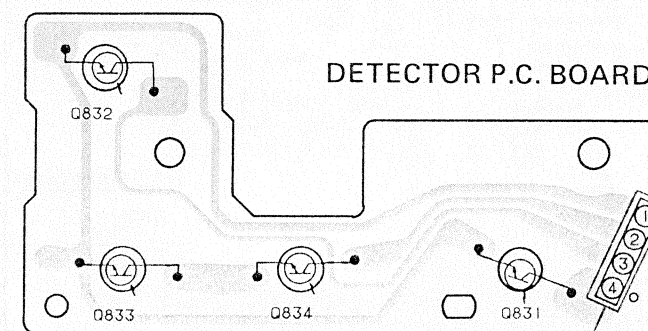


MECHANISM P.C. BOARD

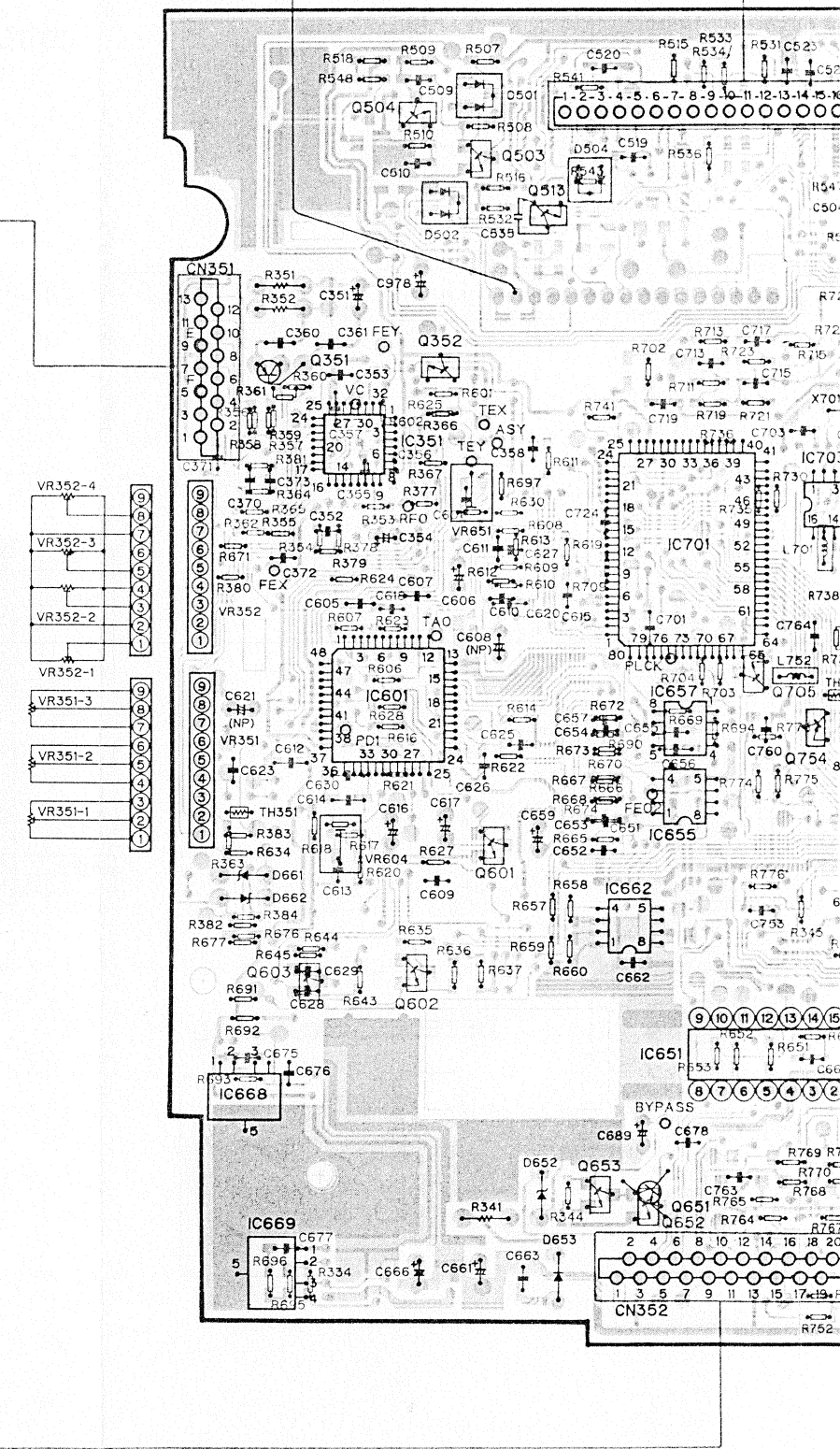
PU UNIT



DETECTOR P.C. BOARD



CD TUNER UNIT



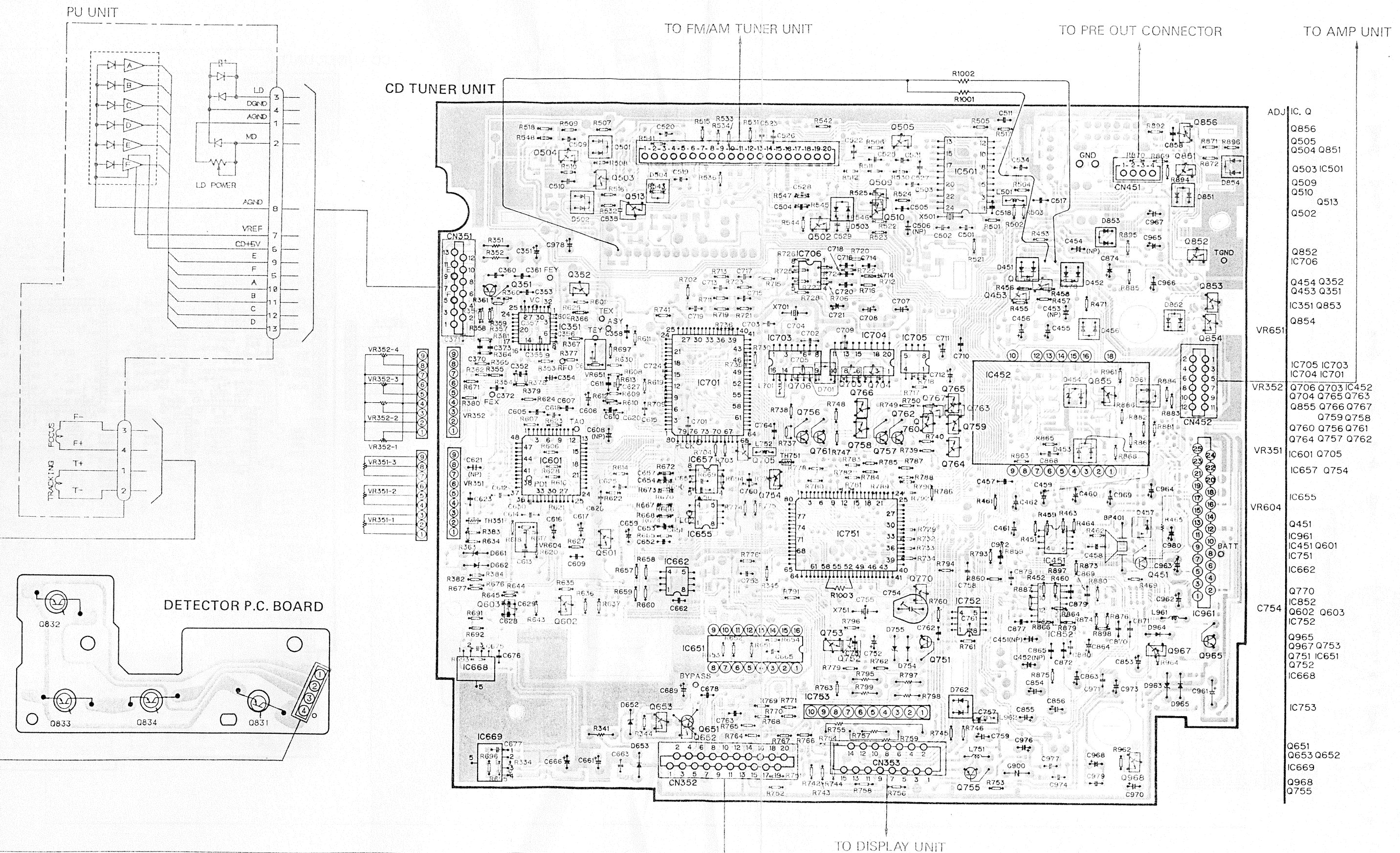
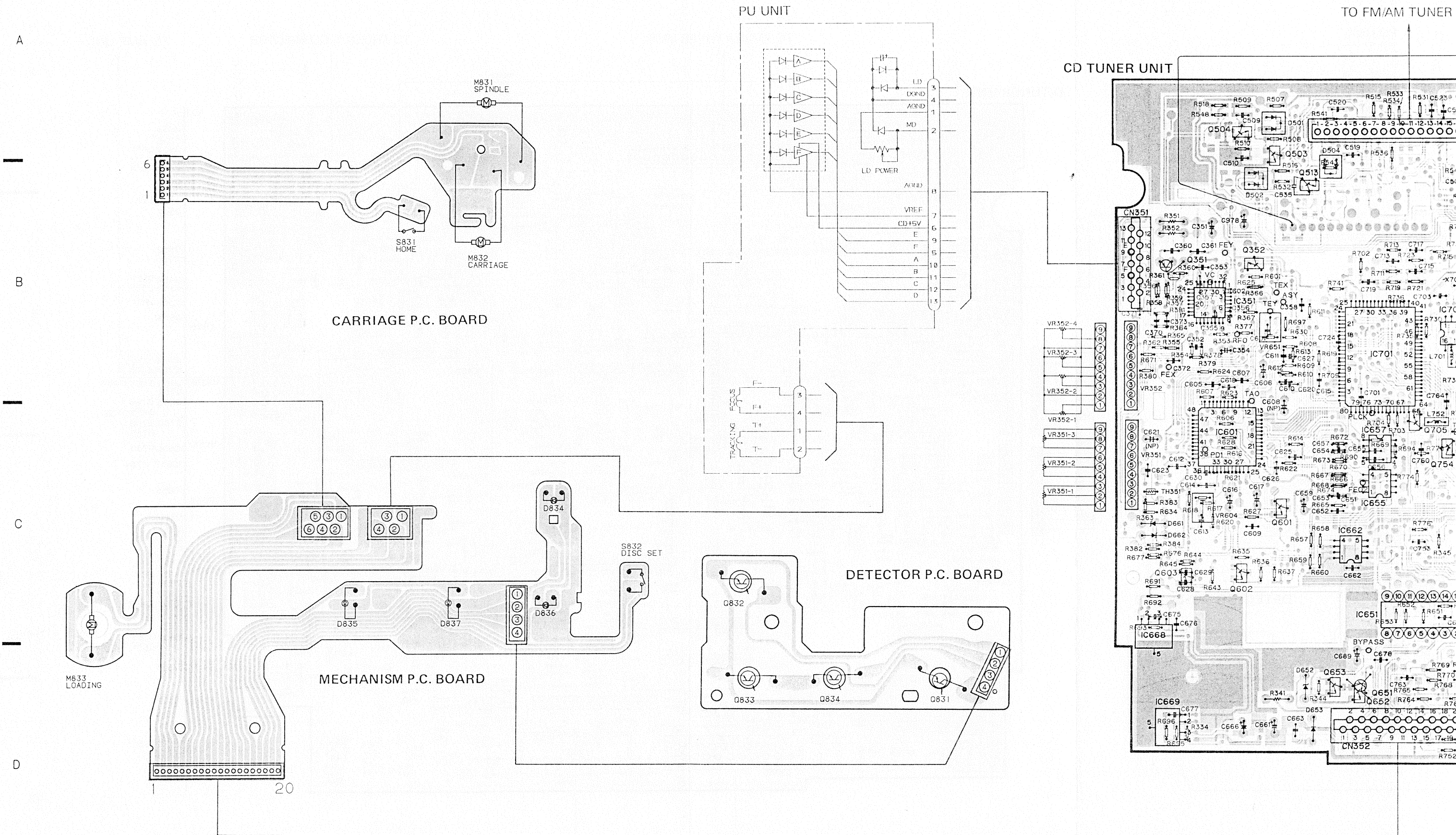
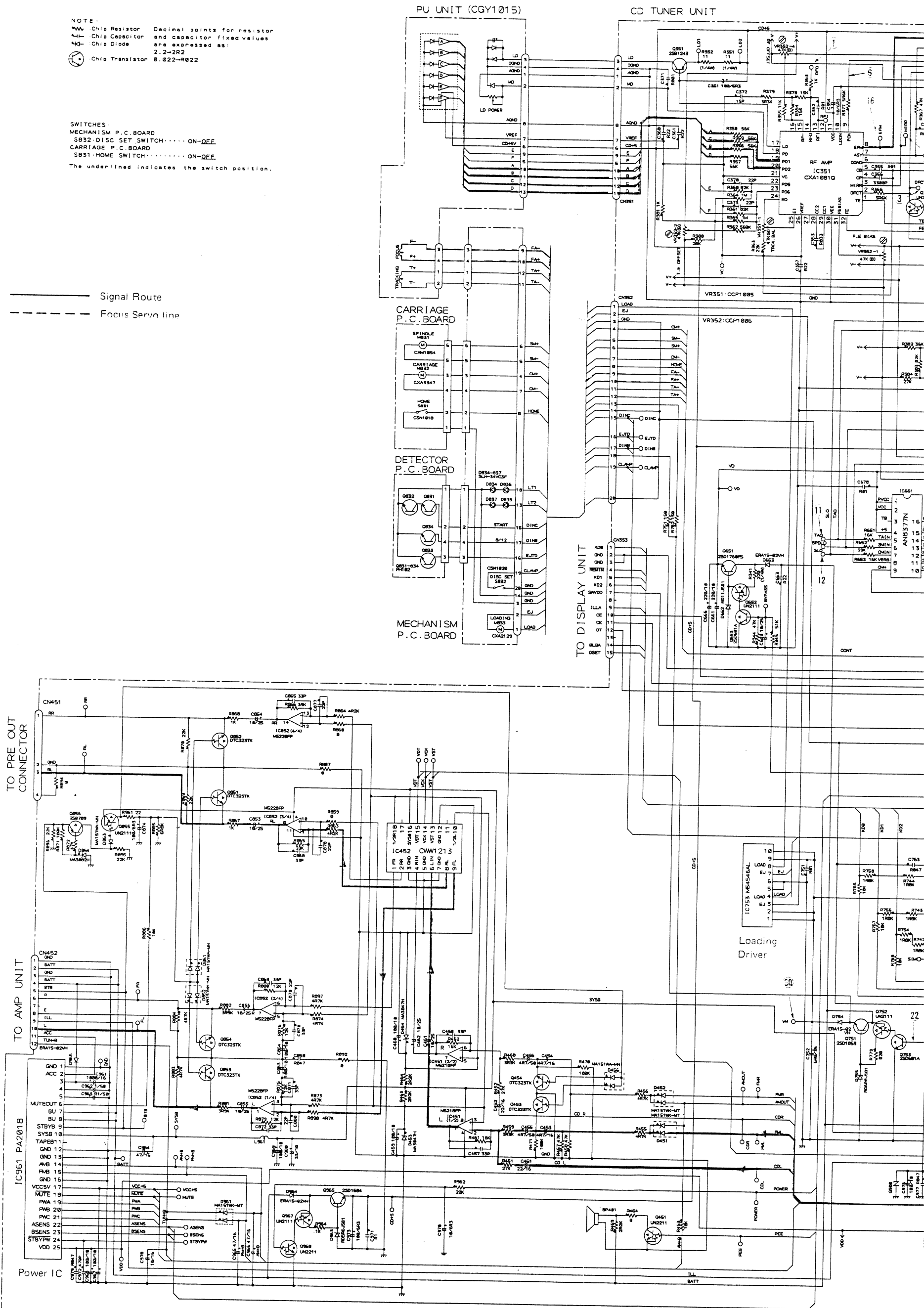


Fig. 51

14. CONNECTION DIAGRAM (DEH-620/US)



15.SHCHEMATIC CIRCUIT DIAGRAM (DEH-620/US)



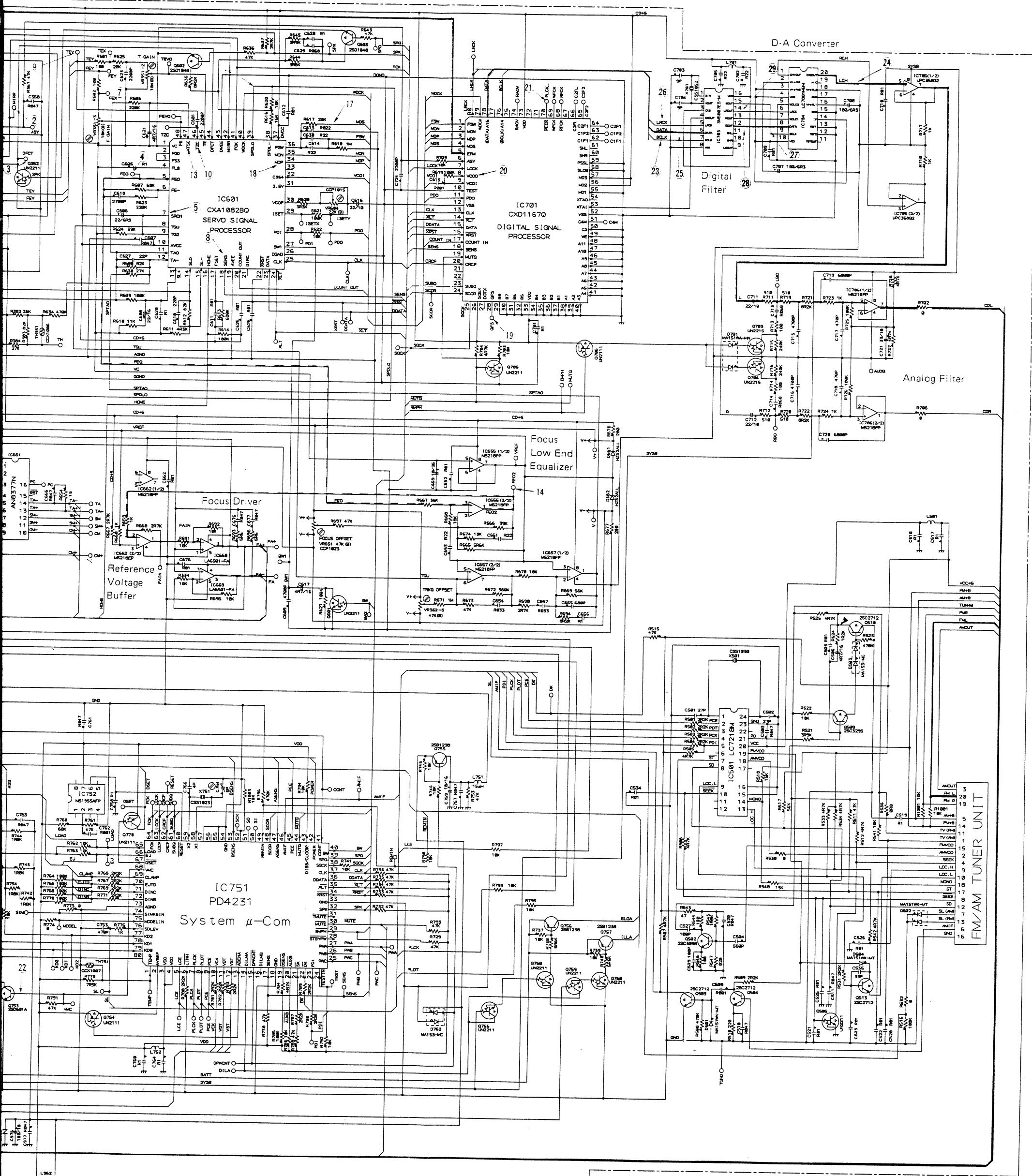


Fig. 53

16.SHEMATIC CIRCUIT DIAGRAM (DEH-80/US)

NOTE:
 Chip Resistor: Decimal points for resistor and capacitor fixed values are expressed as:
 2.2-2R2
 0.222-R022
 Chip Capacitor
 Chip Diode
 Chip Transistor

SWITCHES
 MECHANISM P.C. BOARD
 SB32 DISC SET SWITCH ON-OFF
 CARRIAGE P.C. BOARD
 SB31 HOME SWITCH ON-OFF
 CD TUNER UNIT
 SW401 MAIN IN-FRONT SWITCH ON-OFF
 MISCELLANEOUS
 S1 DSENS SWITCH ON-OFF
 The underlined indicates the switch position.

Signal Route

Focus Servo line

PU UNIT (CGY1015)

CD TUNER UNIT

CARRIAGE P.C. BOARD

DETECTOR P.C. BOARD

MECHANISM P.C. BOARD

TO DISPLAY UNIT

Loading Driver

TO PRE OUT CONNECTOR

TO MAIN IN CONNECTOR

TO AMP UNIT

IC961 PA2018

Power IC

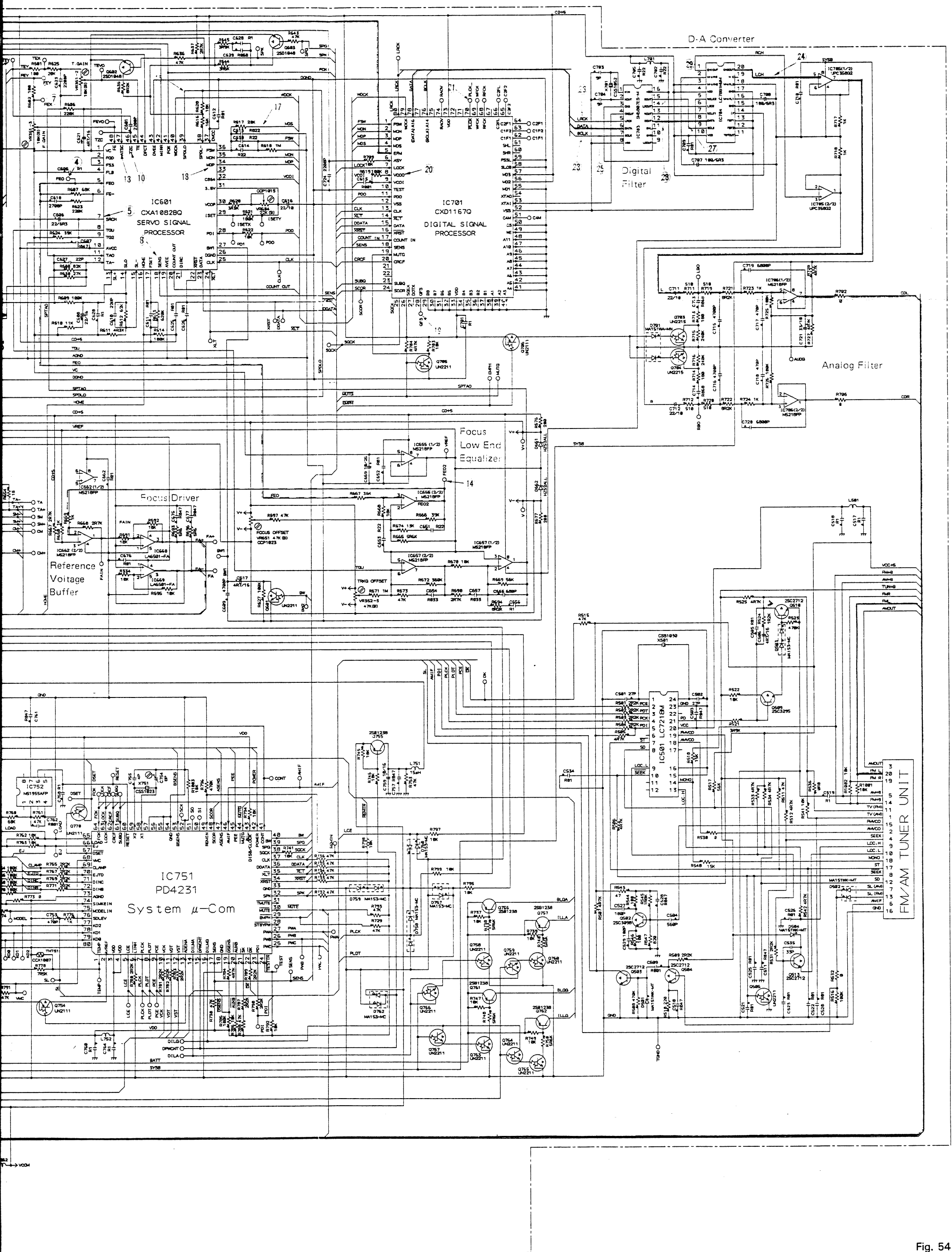


Fig. 54

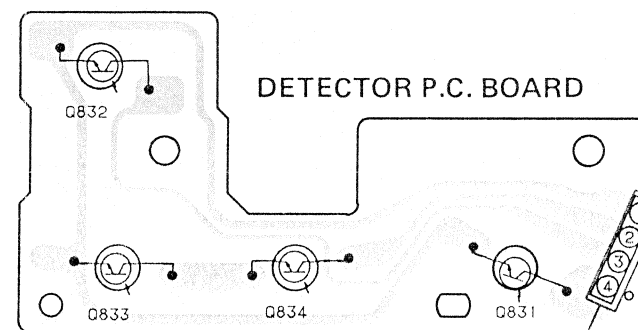
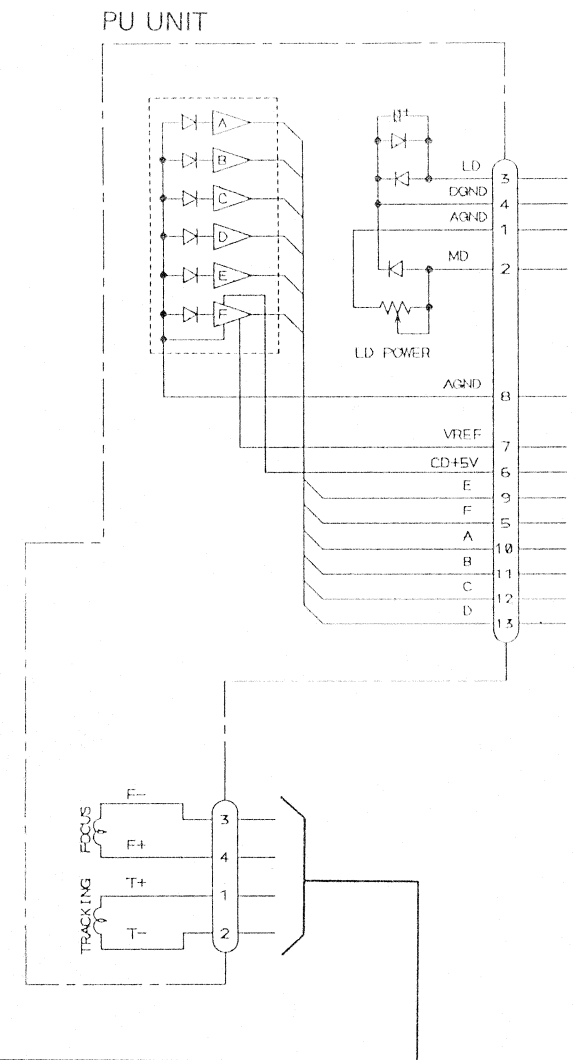
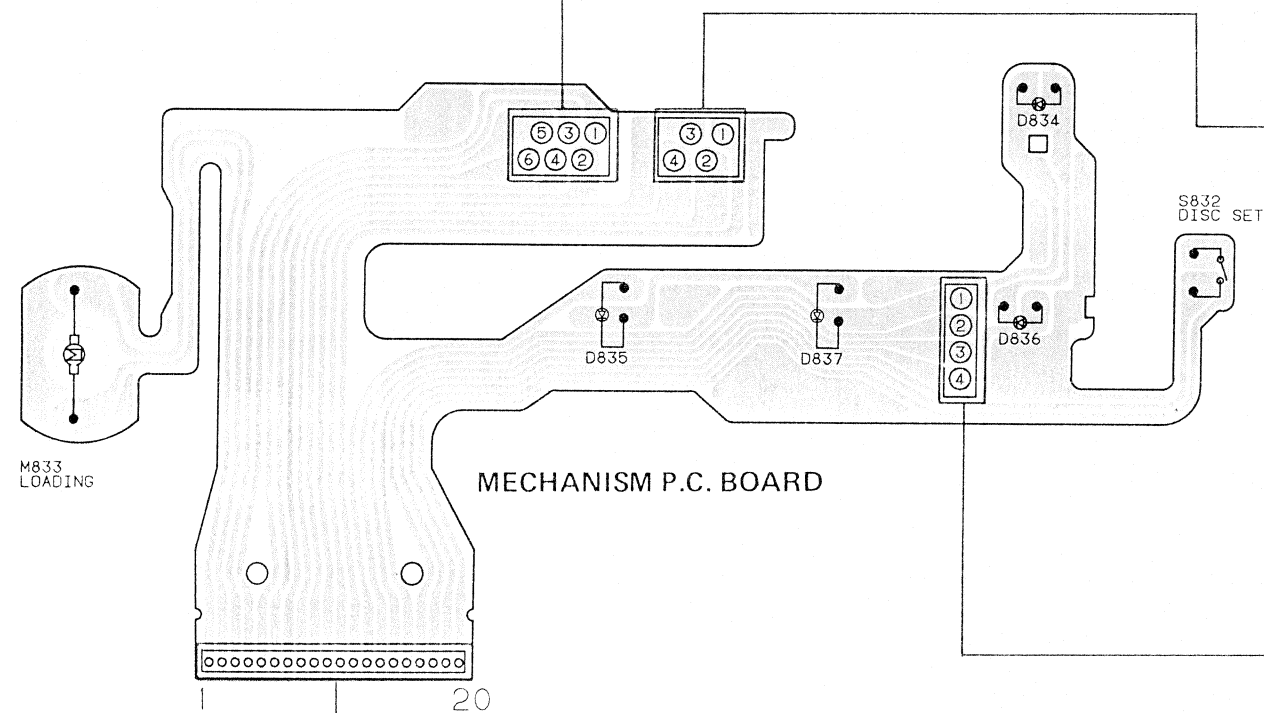
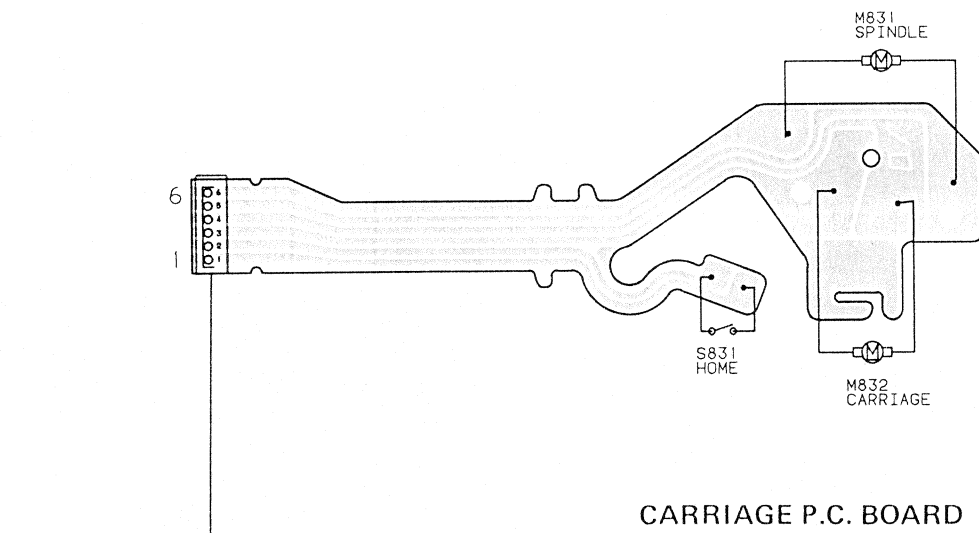
17.CONNECTION DIAGRAM (DEH-80/US)

A

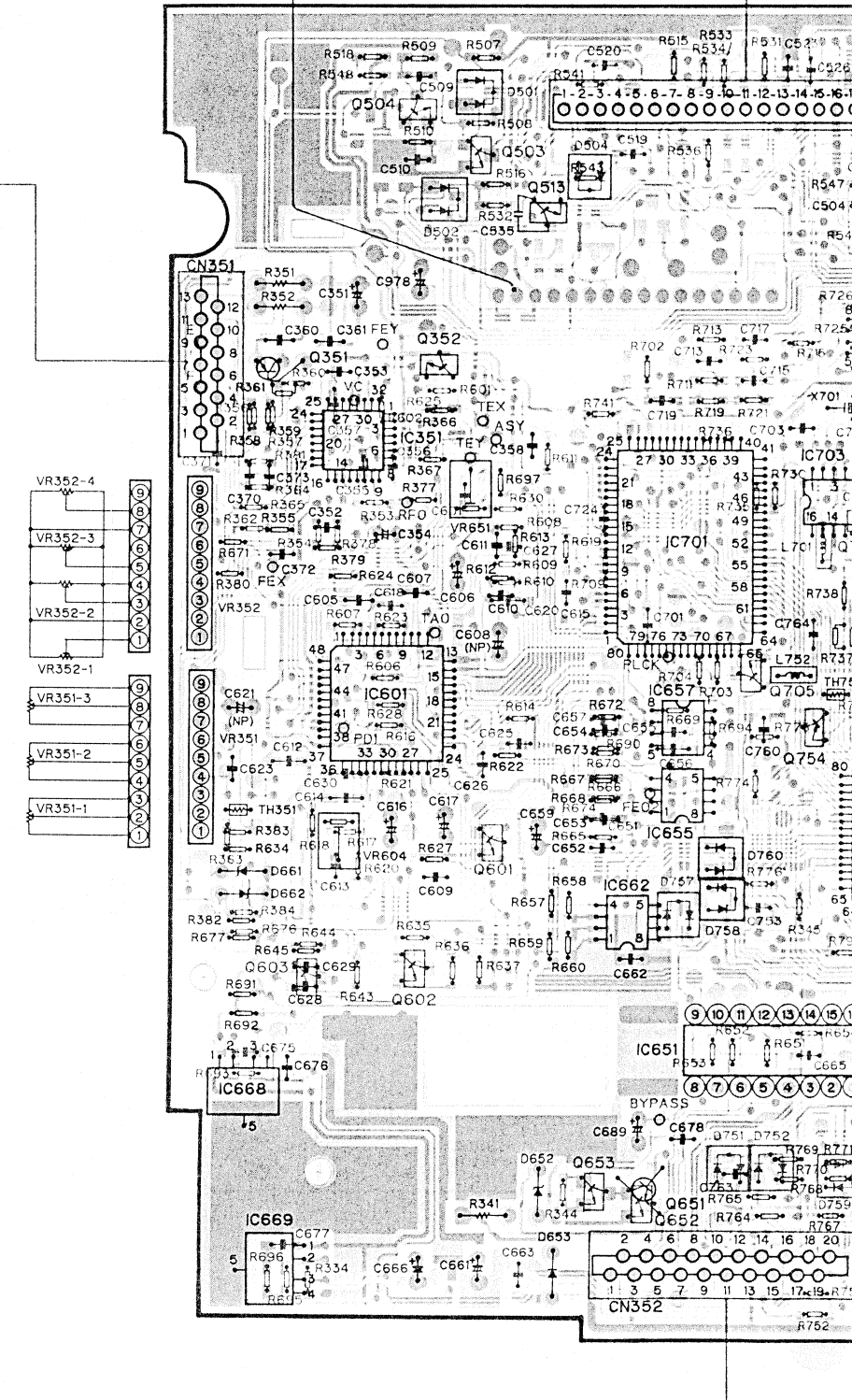
B

C

D



CD TUNER UNIT



PU UNIT

TO FM/AM TUNER UNIT

TO MAIN IN CONNECTOR

TO PRE OUT CONNECTOR

TO AMP UNIT

CD TUNER UNIT

ADJ. IC. Q

Q856
Q505
Q504 Q851

Q503 IC501
Q509
Q510
Q513
Q502

Q852
IC706

Q454 Q352
Q453 Q351
IC351 Q853
Q854

VR651

IC705 IC703
IC704 IC701

VR352 Q706 Q703 IC452
Q704 Q765 Q763
Q855 Q766 Q767
IC851 Q759 Q758
Q760 Q756 Q761
Q764 Q757 Q762

VR351 IC601 Q705
IC657 Q754

IC655

VR604

Q451
IC961
IC451 Q601
IC751
IC662

Q770
IC852
Q602 Q603
IC752

Q965
Q967 Q753
Q751 IC651
Q752
IC668

IC753

Q651
Q653 Q652
IC669
Q968
Q755

TO DISPLAY UNIT

S1

DSENS SWITCH

Fig. 55

D



PU UNIT

CD TUNER UNIT

TO FM/AM TUNER UNIT

TO PRE OUT CONNECTOR

TO AMP UNIT

ADJ. IC. Q

Q856
Q505
Q504 Q851
Q503 IC501
Q509
Q510
Q514 Q513
Q502

Q852
IC706 Q508
IC502
Q454 Q352
Q453 Q351
IC351 Q853
Q854

IC705 IC703
IC704 IC701

Q706 Q703 IC452
Q704 Q765 Q763
Q855 Q766 Q767
Q759 Q758
Q760 Q756 Q761 Q455
Q764 Q757 Q762

IC601 Q705
IC657 Q754

IC655

Q451
IC961
IC451 Q601
IC751
IC662

Q770
IC852
Q602 Q603
IC752

Q965
Q967 Q753
Q751 IC651
Q752
IC668

IC753

Q651
Q653 Q652
IC669
Q968
Q755

VR352-4
VR352-3
VR352-2
VR352-1
VR351-3
VR351-2
VR351-1

DETECTOR P.C. BOARD

TO DISPLAY UNIT

S1
DSSENS SWITCH

Fig. 56

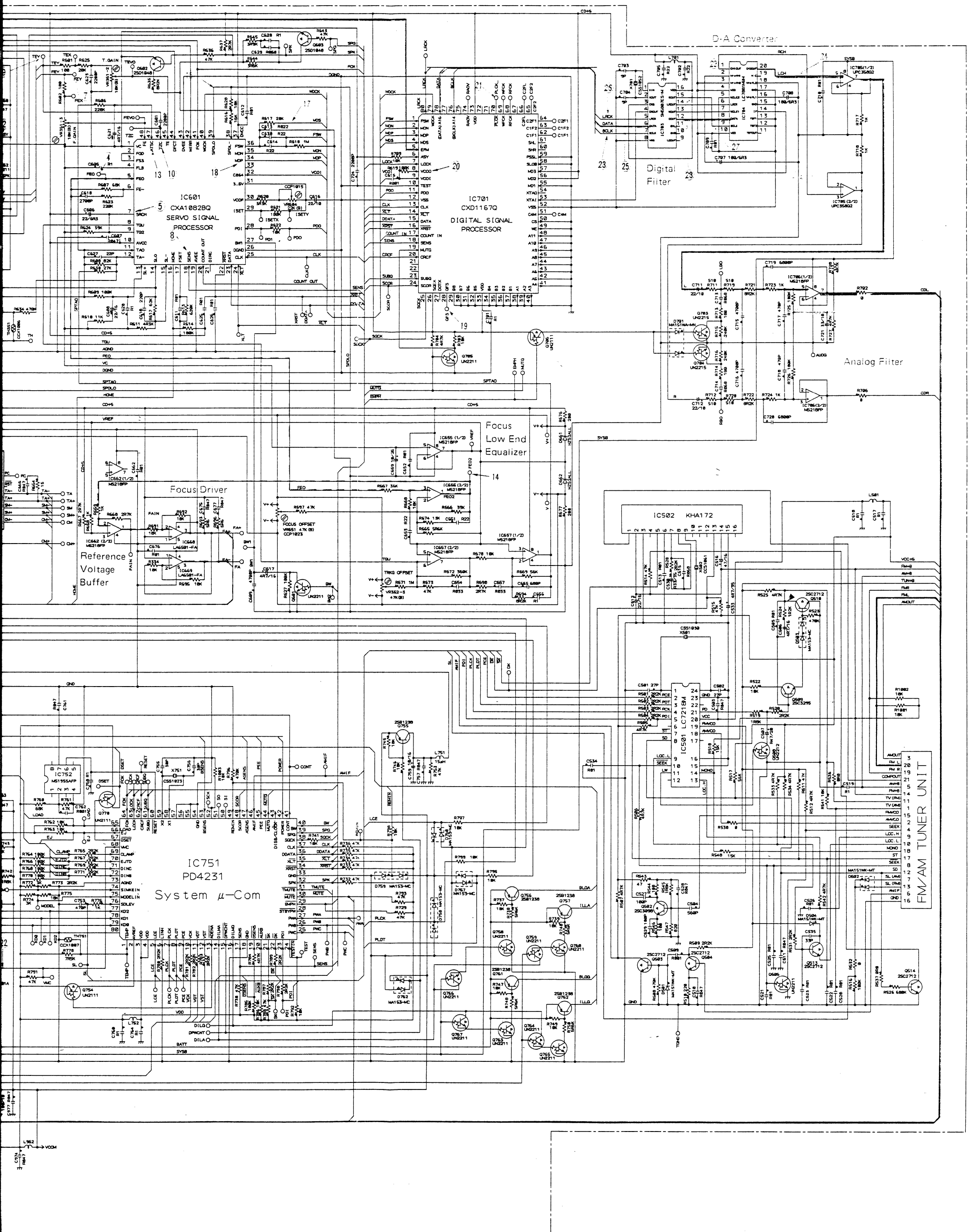


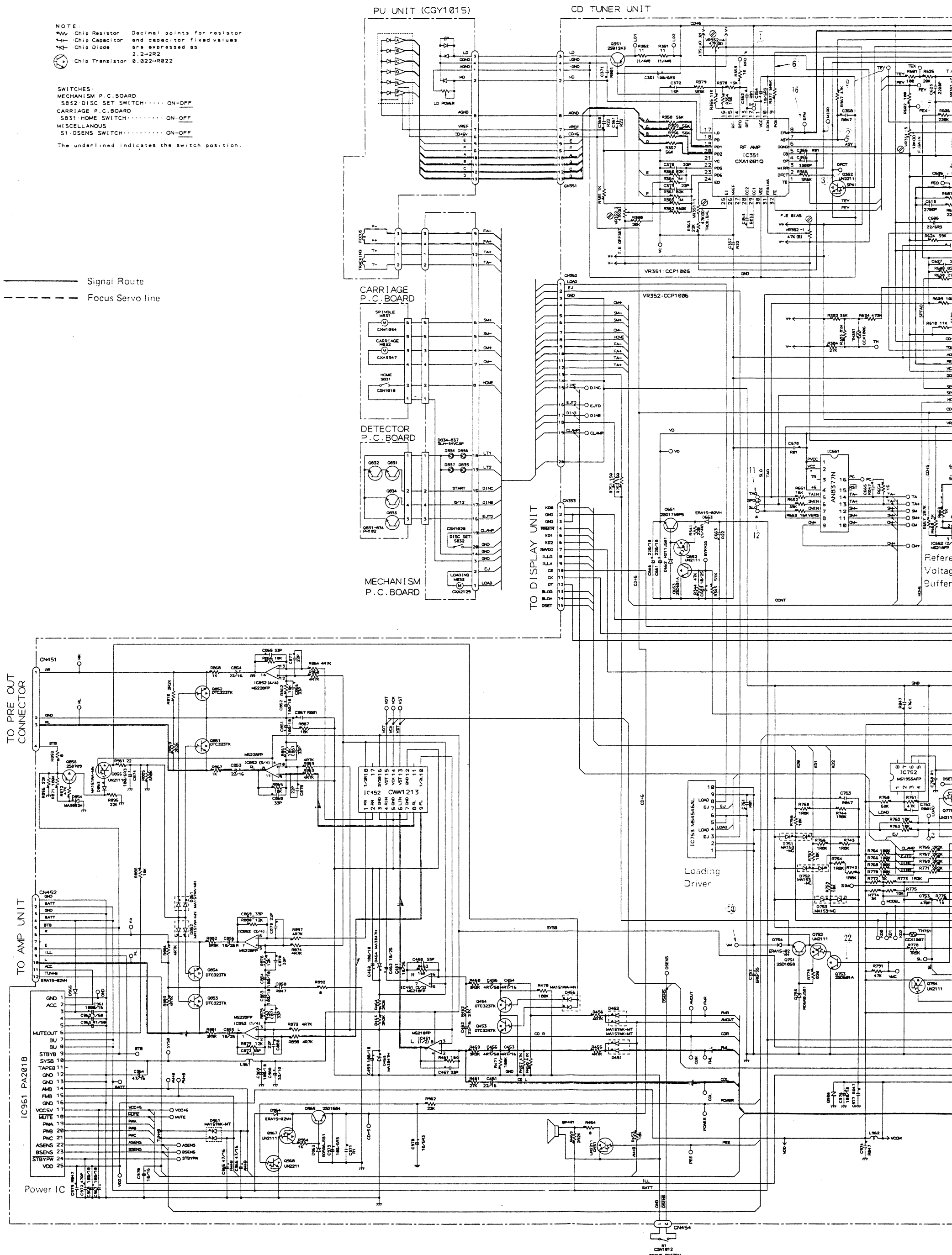
Fig. 57

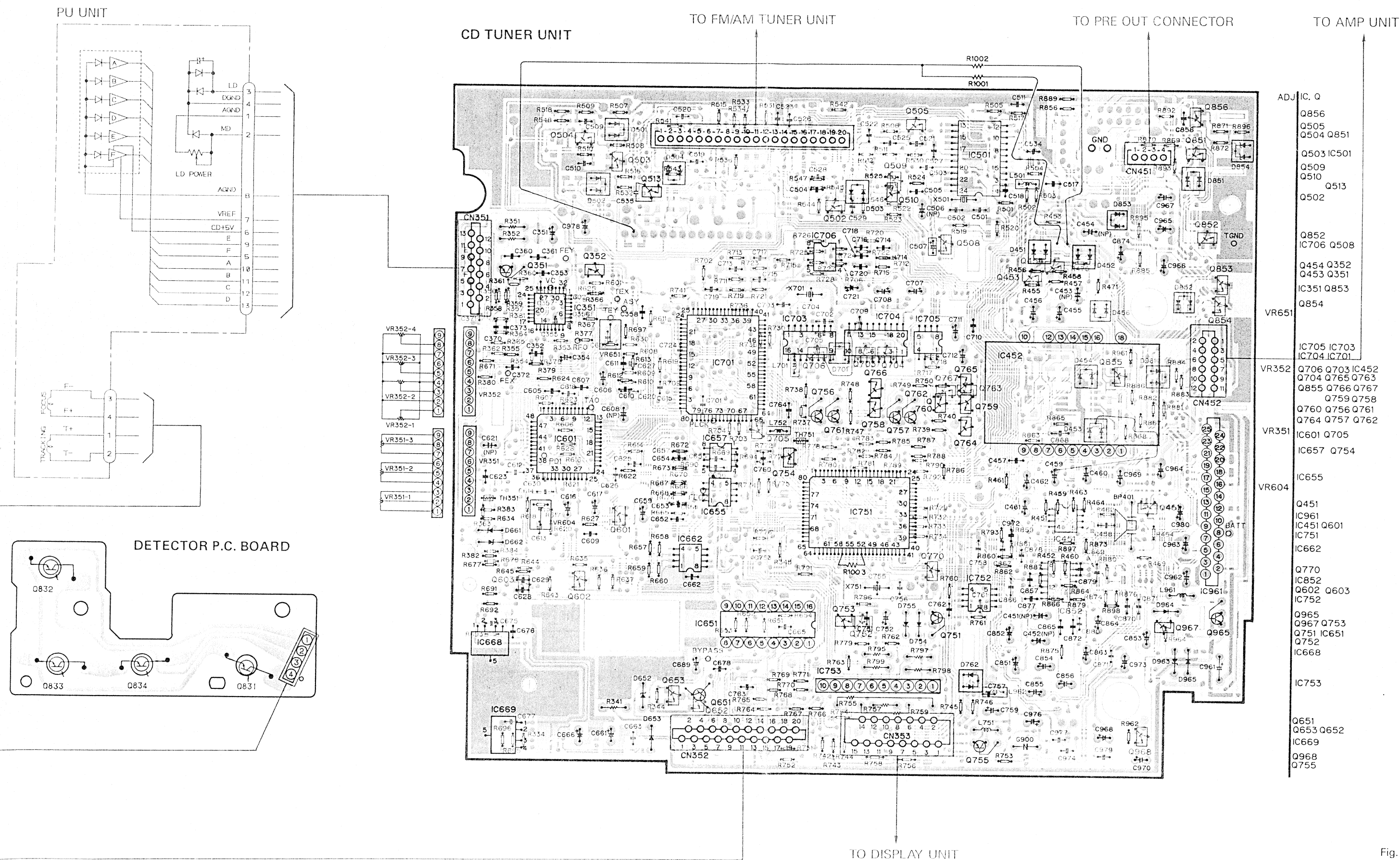
20. SCHEMATIC CIRCUIT DIAGRAM (DEH-700/EW)

NOTE
 Chip Resistor
 Chip Capacitor
 Chip Diode
 Chip Transistor
 Decimal points for resistor and capacitor fixed values are expressed as:
 2.2-2R2
 0.022-0R22

SWITCHES:
 MECHANISM P.C. BOARD
 S852 DISC SET SWITCH..... ON-OFF
 CARRIAGE P.C. BOARD
 S851 HOME SWITCH..... ON-OFF
 MISCELLANEOUS
 S1: DSENS SWITCH..... ON-OFF
 The underlined indicates the switch position.

— Signal Route
 - - - Focus Servo line





21.CONNECTION DIAGRAM (DEH-700/EW)

A

B

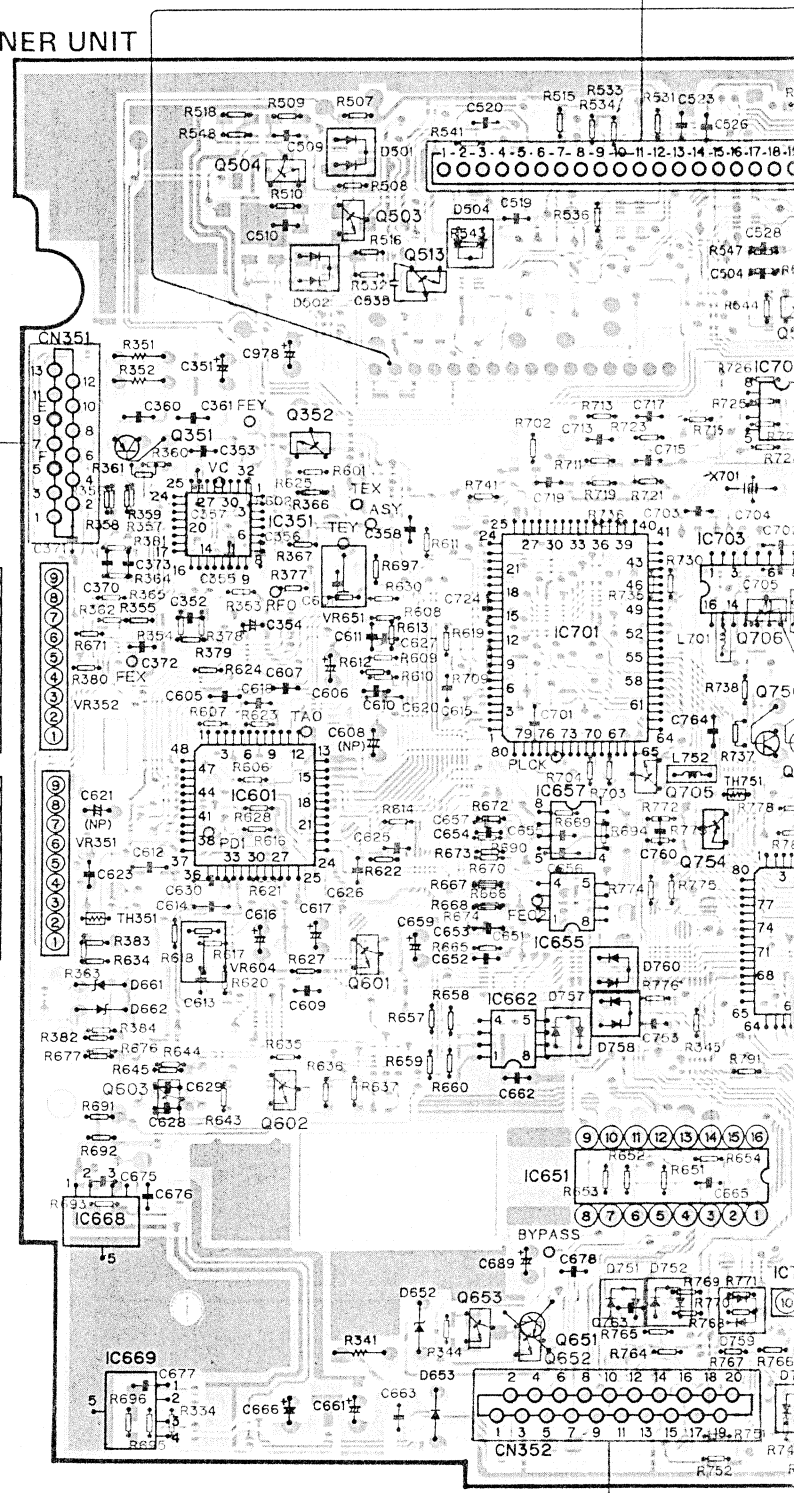
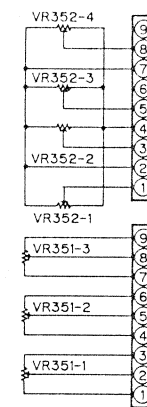
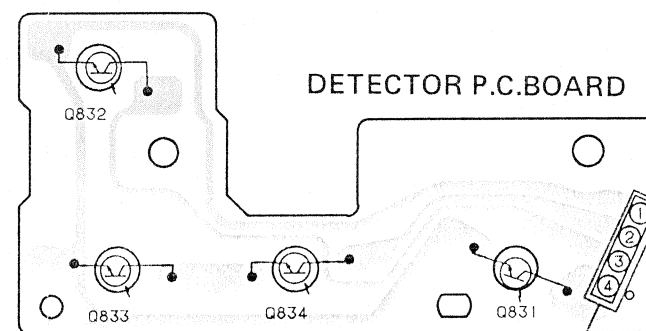
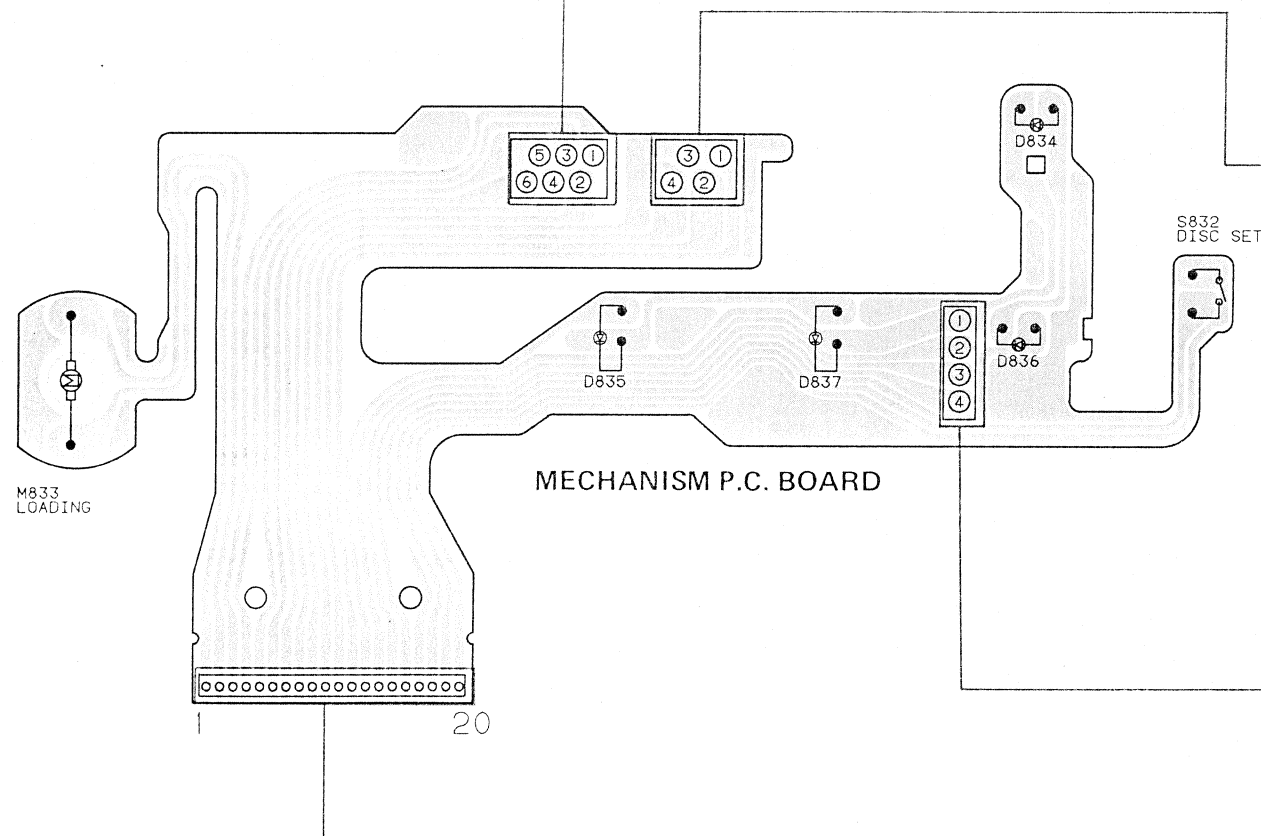
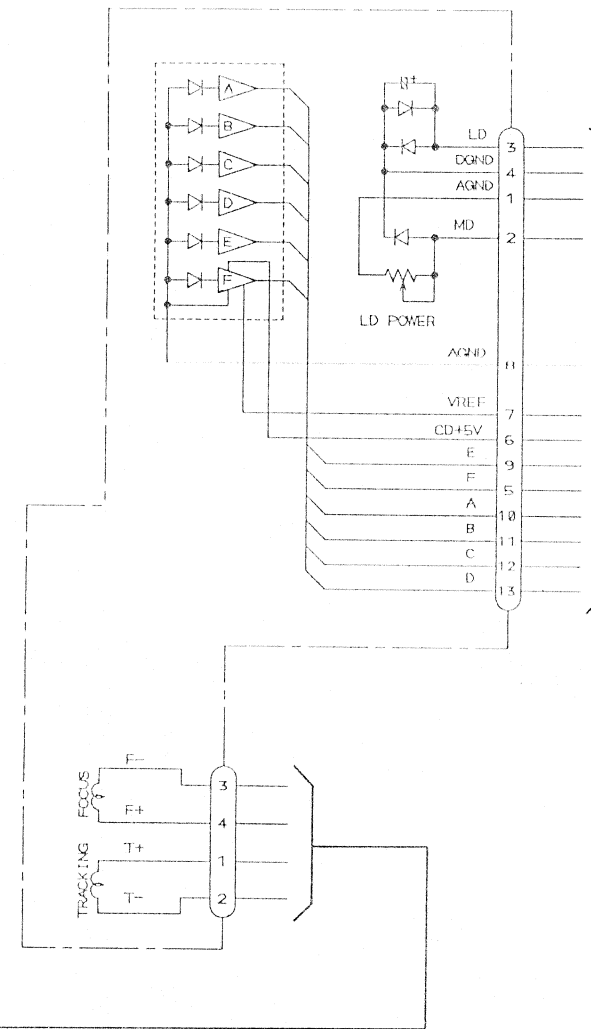
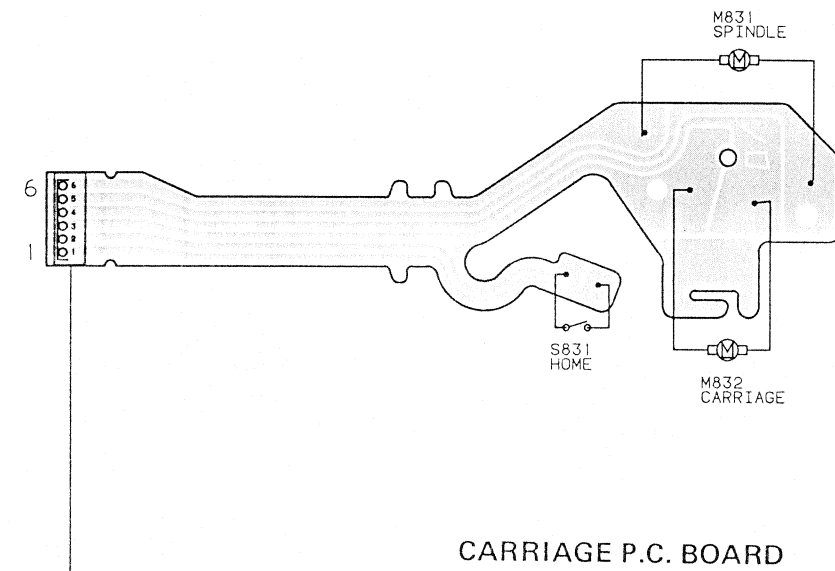
C

D

PU UNIT

TO FM/AM TUNER UNIT

CD TUNER UNIT



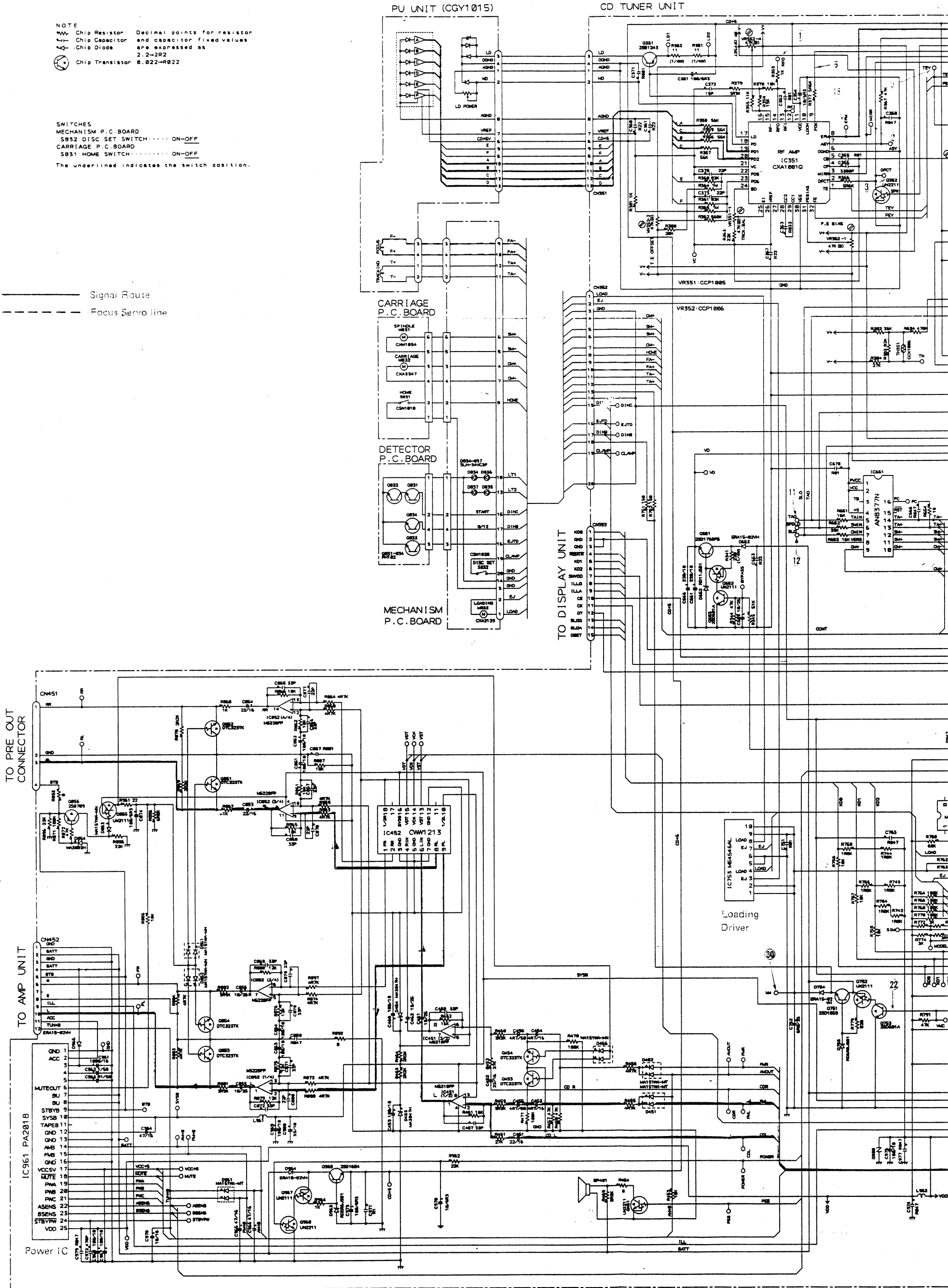


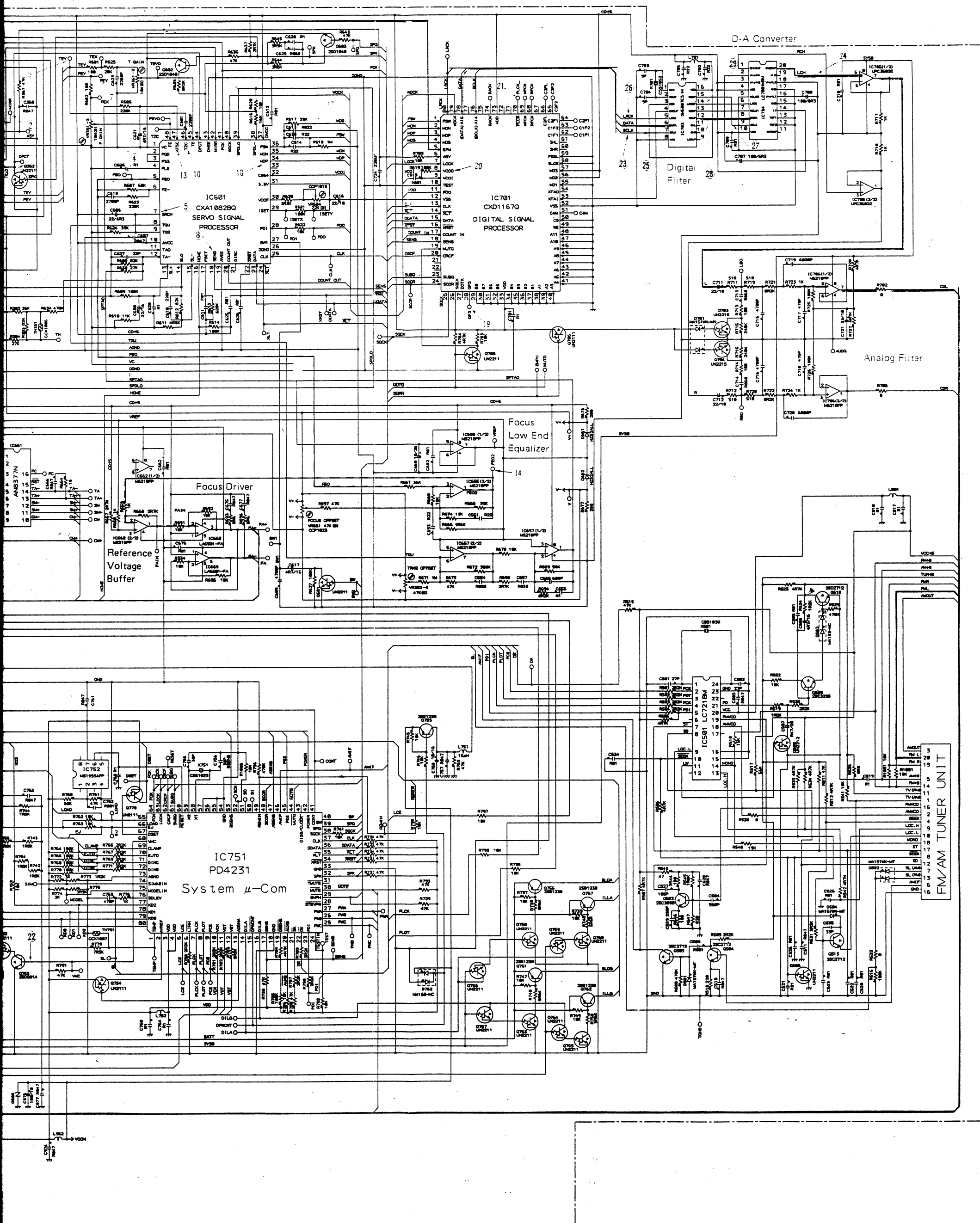
23. SCHEMATIC CIRCUIT DIAGRAM (DEH-600/EW)

NOTE
 Chip Resistor
 Chip Capacitor
 Chip Diode
 Chip Transistor
 Decimal points for resistor and capacitor fixed values are expressed as 2.2-2R2
 0.022-0R22

SWITCHES
 MECHANISM P.C. BOARD
 S032 DISC SET SWITCH ON-OFF
 CARRIAGE P.C. BOARD
 S031 HOME SWITCH ON-OFF
 The underlined indicates the switch position.

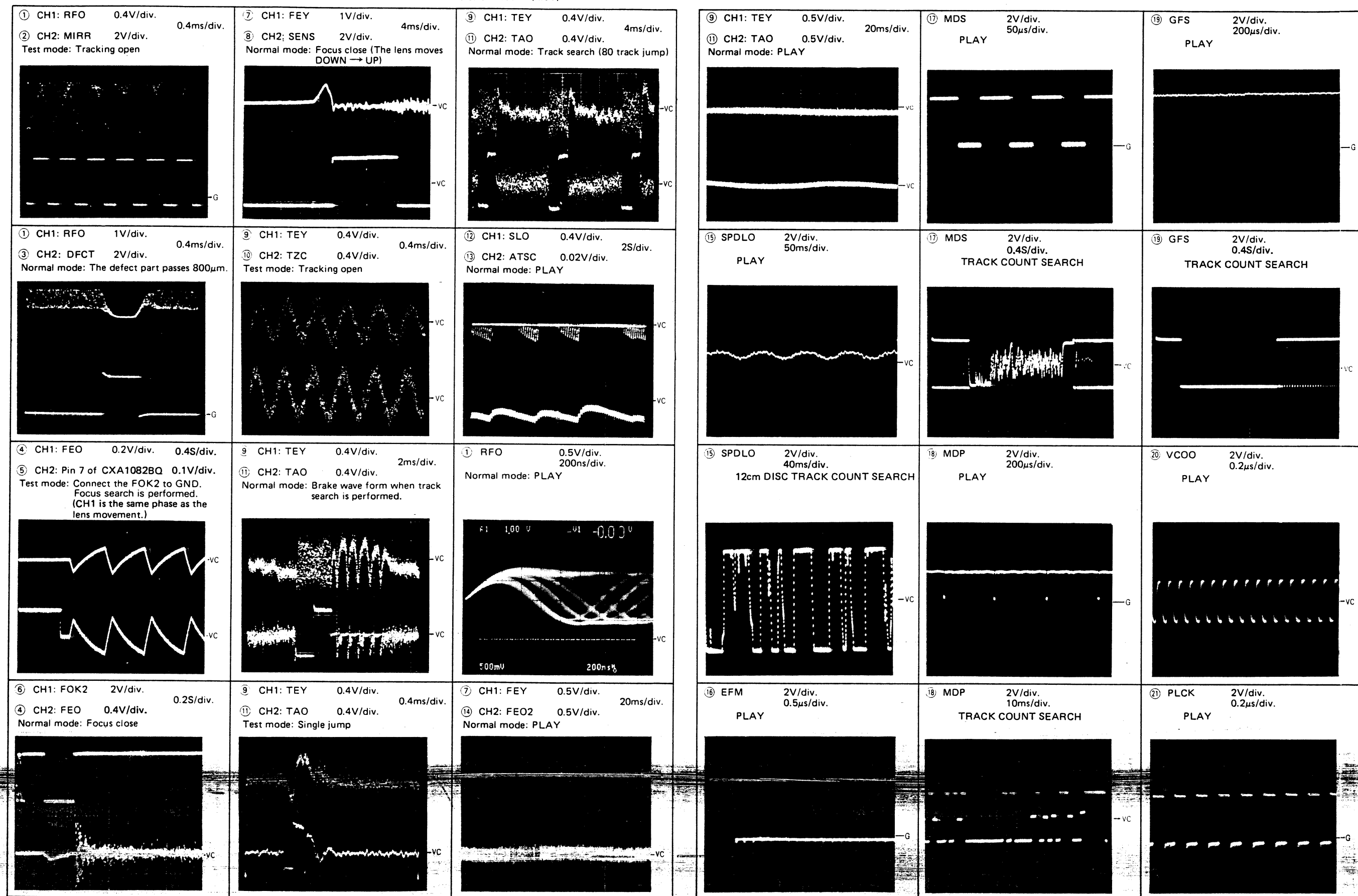
Signal Route
 Focus Servo line





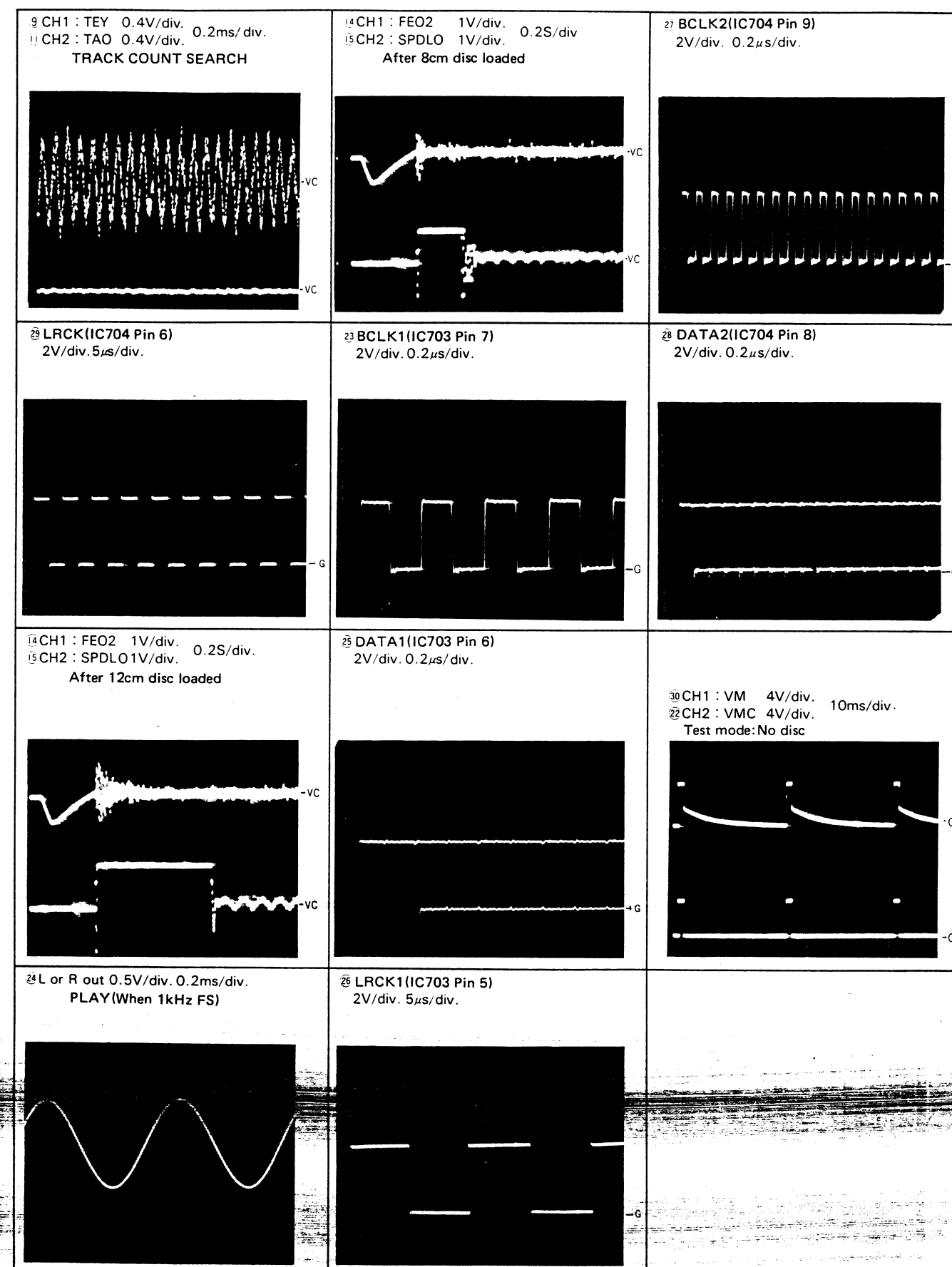
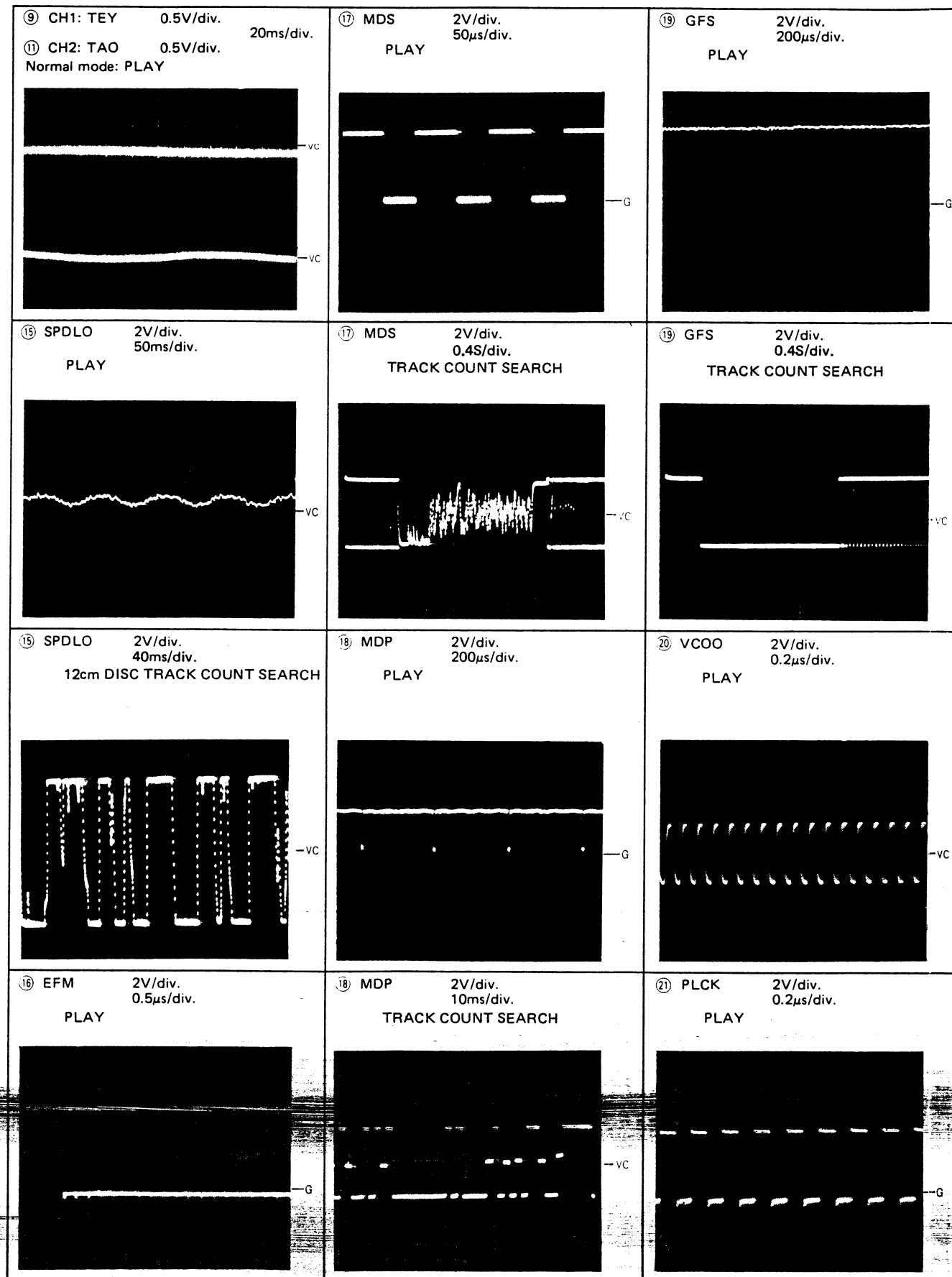
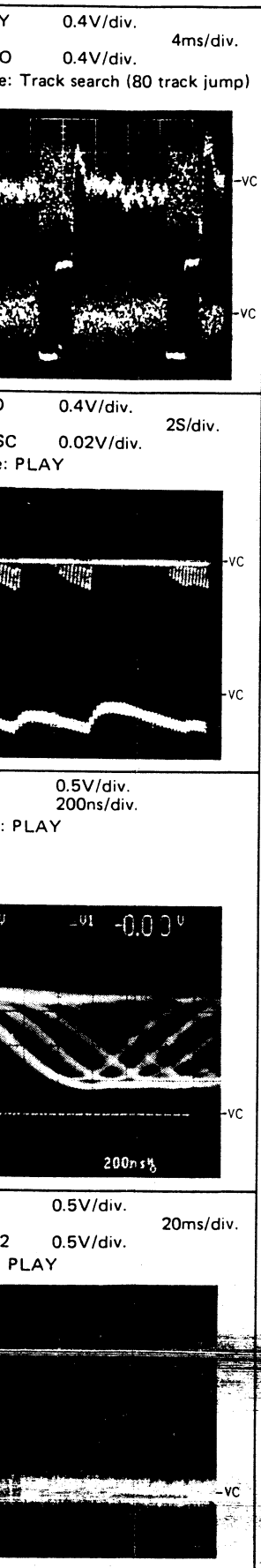
Note: 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage
G: GND VC: Pin 26 of CXA1081Q (2.5V)

● Wave Forms



ing points in the circuit diagram.

1 (2.5V)



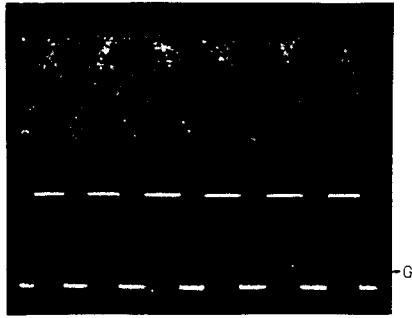
Note: 1. The encircled numbers denote measuring points in the circuit diagram.

2. Reference voltage

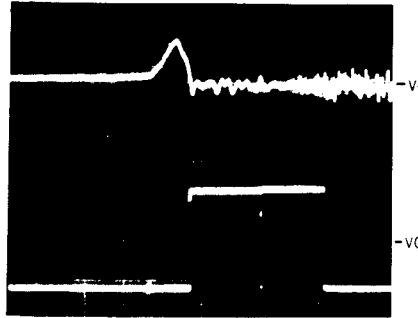
G: GND VC: Pin 26 of CXA1081Q (2.5V)

● Wave Forms

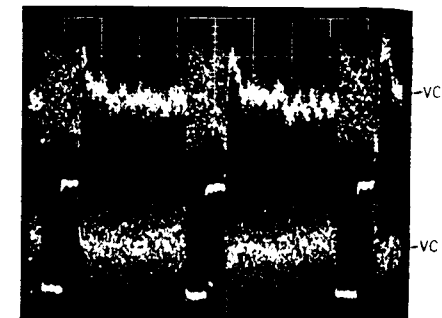
① CH1: RFO 0.4V/div. 0.4ms/div.
② CH2: MIRR 2V/div. 0.4ms/div.
Test mode: Tracking open



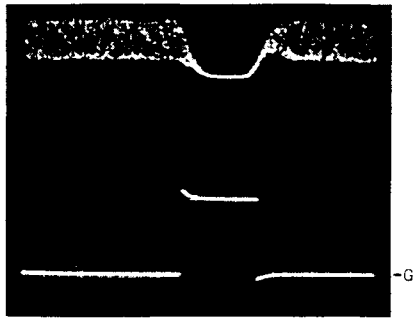
⑦ CH1: FEY 1V/div. 4ms/div.
⑧ CH2: SENS 2V/div. 4ms/div.
Normal mode: Focus close (The lens moves DOWN → UP)



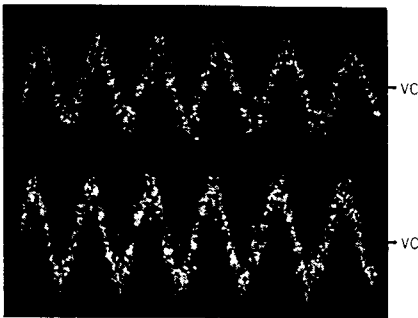
⑨ CH1: TEY 0.4V/div. 4ms/div.
⑪ CH2: TAO 0.4V/div. 4ms/div.
Normal mode: Track search (80 track jump)



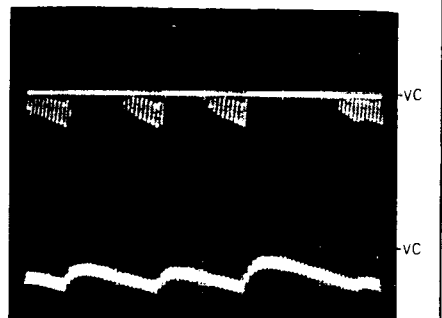
① CH1: RFO 1V/div. 0.4ms/div.
③ CH2: DFCT 2V/div. 0.4ms/div.
Normal mode: The defect part passes 800μm.



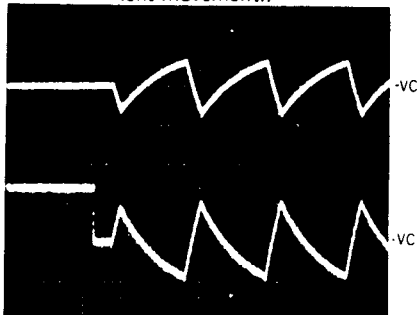
⑨ CH1: TEY 0.4V/div. 0.4ms/div.
⑩ CH2: TZC 0.4V/div. 0.4ms/div.
Test mode: Tracking open



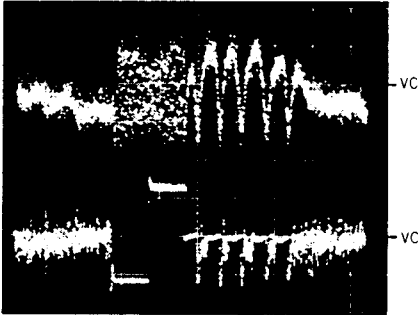
⑫ CH1: SLO 0.4V/div. 2S/div.
⑬ CH2: ATSC 0.02V/div. 2S/div.
Normal mode: PLAY



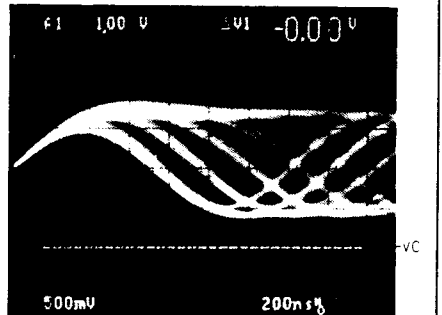
④ CH1: FEO 0.2V/div. 0.4S/div.
⑤ CH2: Pin 7 of CXA1082BQ 0.1V/div. 0.4S/div.
Test mode: Connect the FOK2 to GND. Focus search is performed. (CH1 is the same phase as the lens movement.)



⑨ CH1: TEY 0.4V/div. 2ms/div.
⑪ CH2: TAO 0.4V/div. 2ms/div.
Normal mode: Brake wave form when track search is performed.



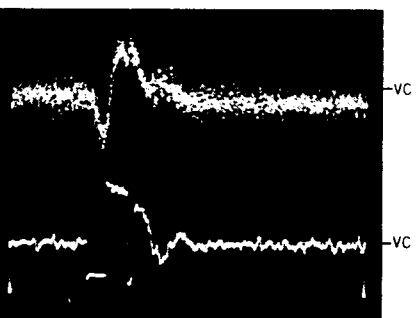
① RFO 0.5V/div. 200ns/div.
Normal mode: PLAY



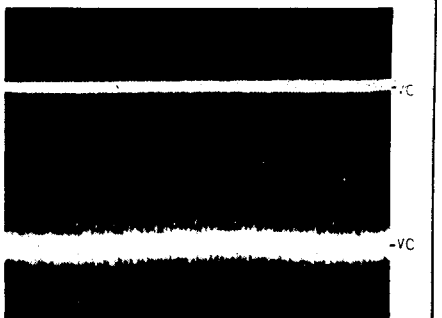
⑥ CH1: FOK2 2V/div. 0.2S/div.
④ CH2: FEO 0.4V/div. 0.2S/div.
Normal mode: Focus close

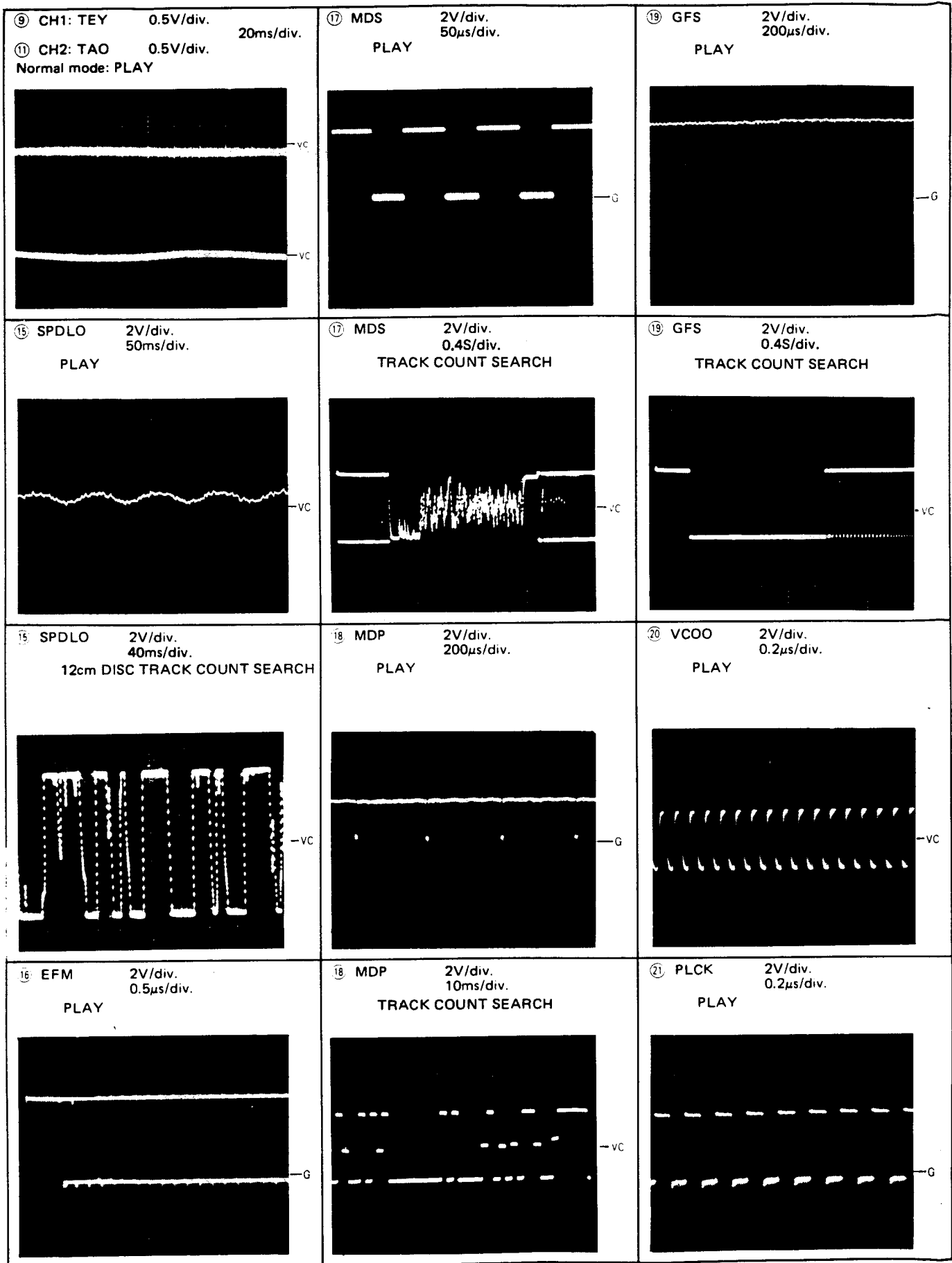


⑨ CH1: TEY 0.4V/div. 0.4ms/div.
⑪ CH2: TAO 0.4V/div. 0.4ms/div.
Test mode: Single jump

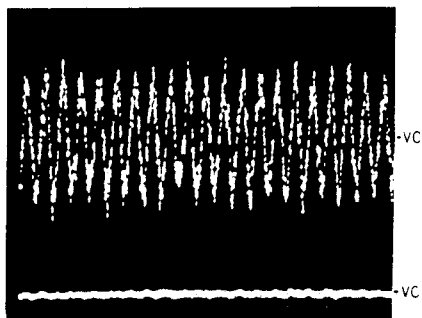


⑦ CH1: FEY 0.5V/div. 20ms/div.
⑭ CH2: FEO2 0.5V/div. 20ms/div.
Normal mode: PLAY

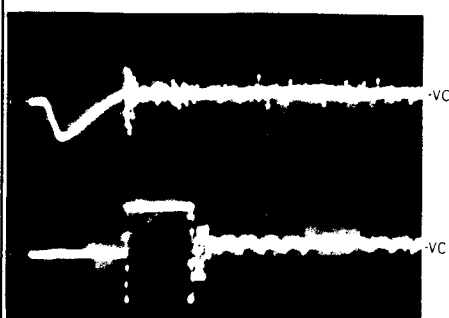




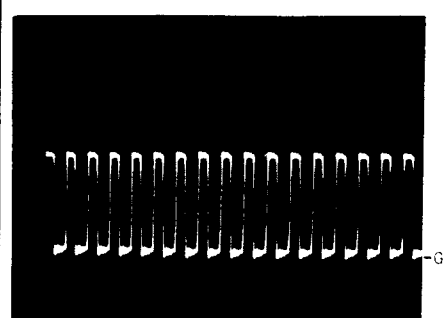
9 CH1 : TEY 0.4V/div. 0.2ms/div.
11 CH2 : TAO 0.4V/div. 0.2ms/div.
TRACK COUNT SEARCH



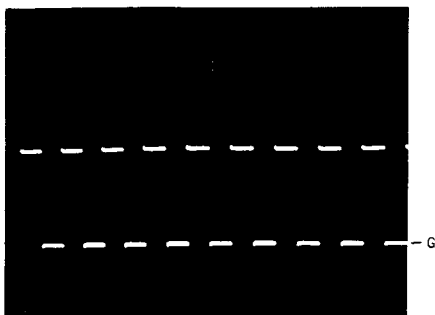
14 CH1 : FE02 1V/div. 0.2S/div.
15 CH2 : SPDLO 1V/div. 0.2S/div.
After 8cm disc loaded



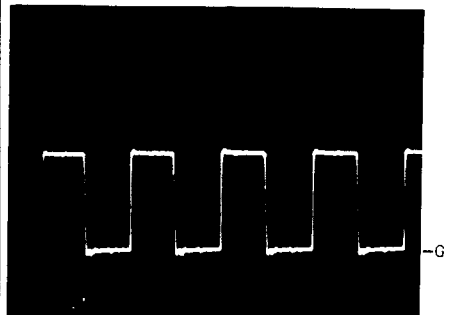
27 BCLK2(IC704 Pin 9)
2V/div. 0.2μs/div.



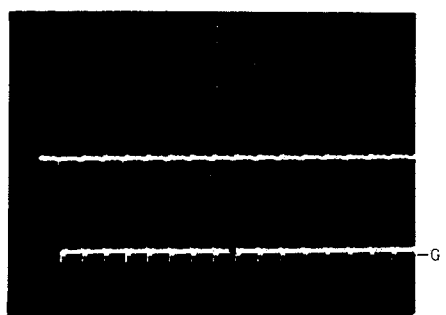
29 LRCK(IC704 Pin 6)
2V/div. 5μs/div.



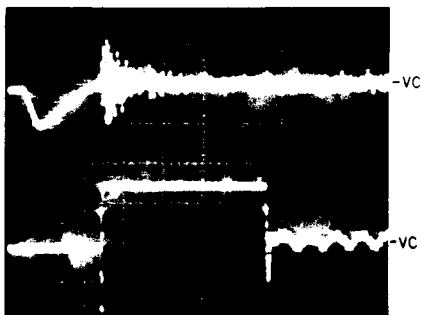
23 BCLK1(IC703 Pin 7)
2V/div. 0.2μs/div.



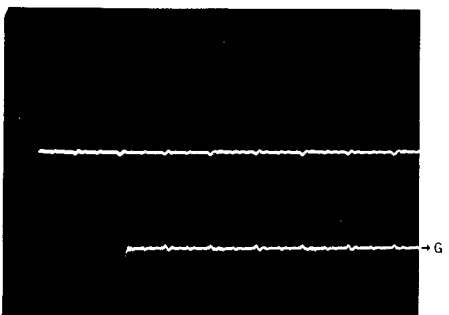
28 DATA2(IC704 Pin 8)
2V/div. 0.2μs/div.



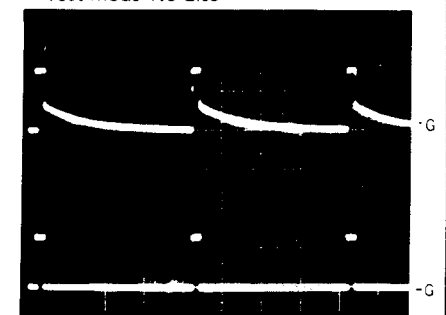
14 CH1 : FE02 1V/div. 0.2S/div.
15 CH2 : SPDLO 1V/div. 0.2S/div.
After 12cm disc loaded



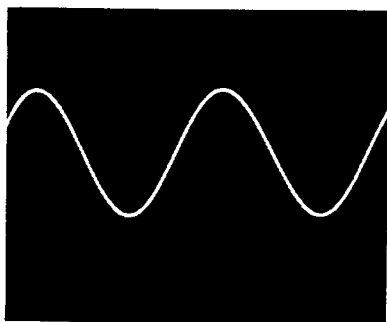
25 DATA1(IC703 Pin 6)
2V/div. 0.2μs/div.



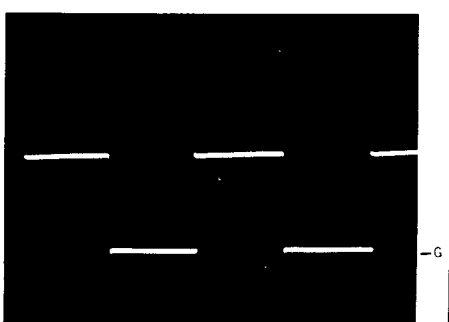
30 CH1 : VM 4V/div. 10ms/div.
22 CH2 : VMC 4V/div. 10ms/div.
Test mode: No disc



24 L or R out 0.5V/div. 0.2ms/div.
PLAY (When 1kHz FS)



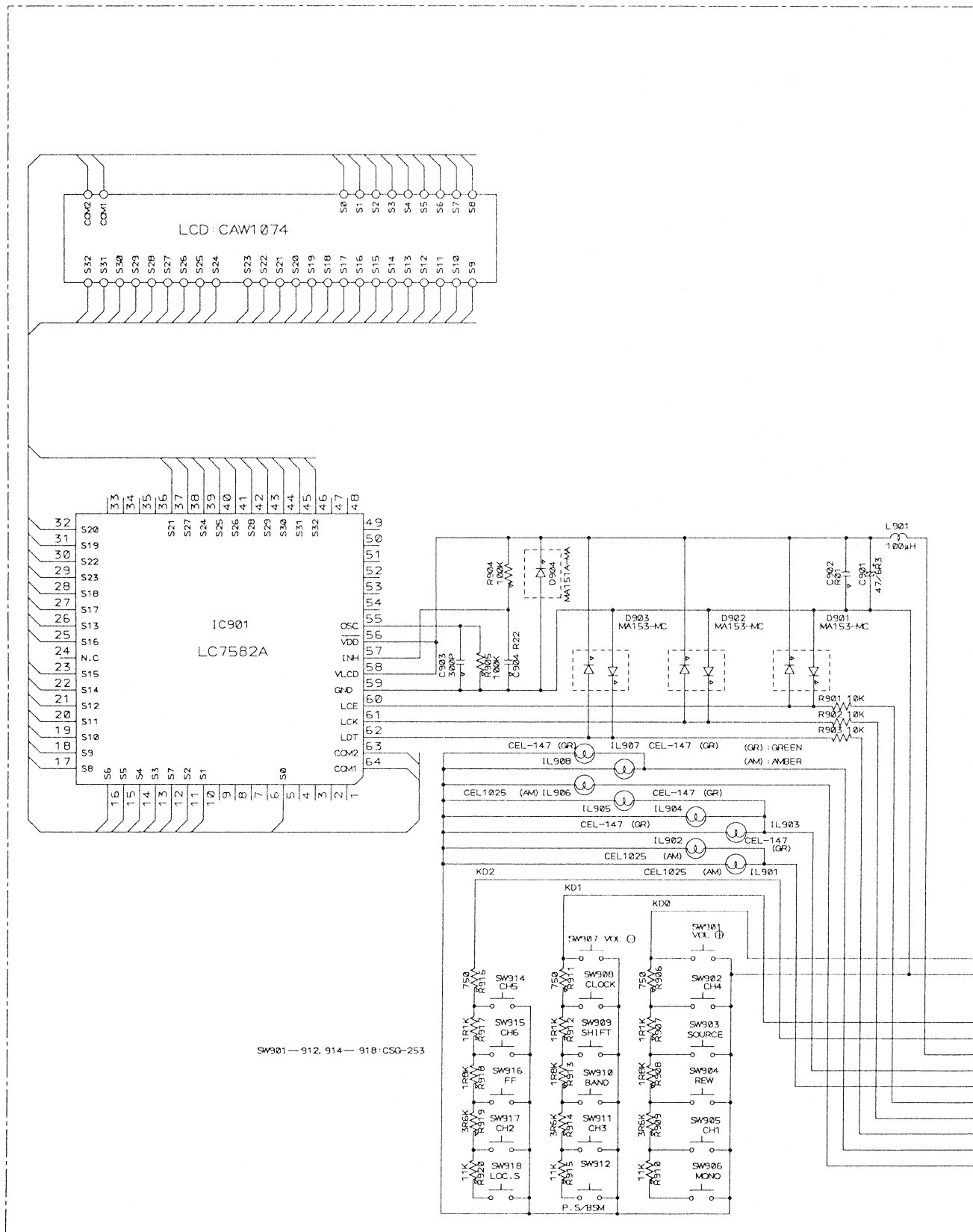
26 LRCK1(IC703 Pin 5)
2V/div. 5μs/div.



24. CIRCUIT DIAGRAM AND P.C. BOARD PATTERN

• DEH-750/UC, ES

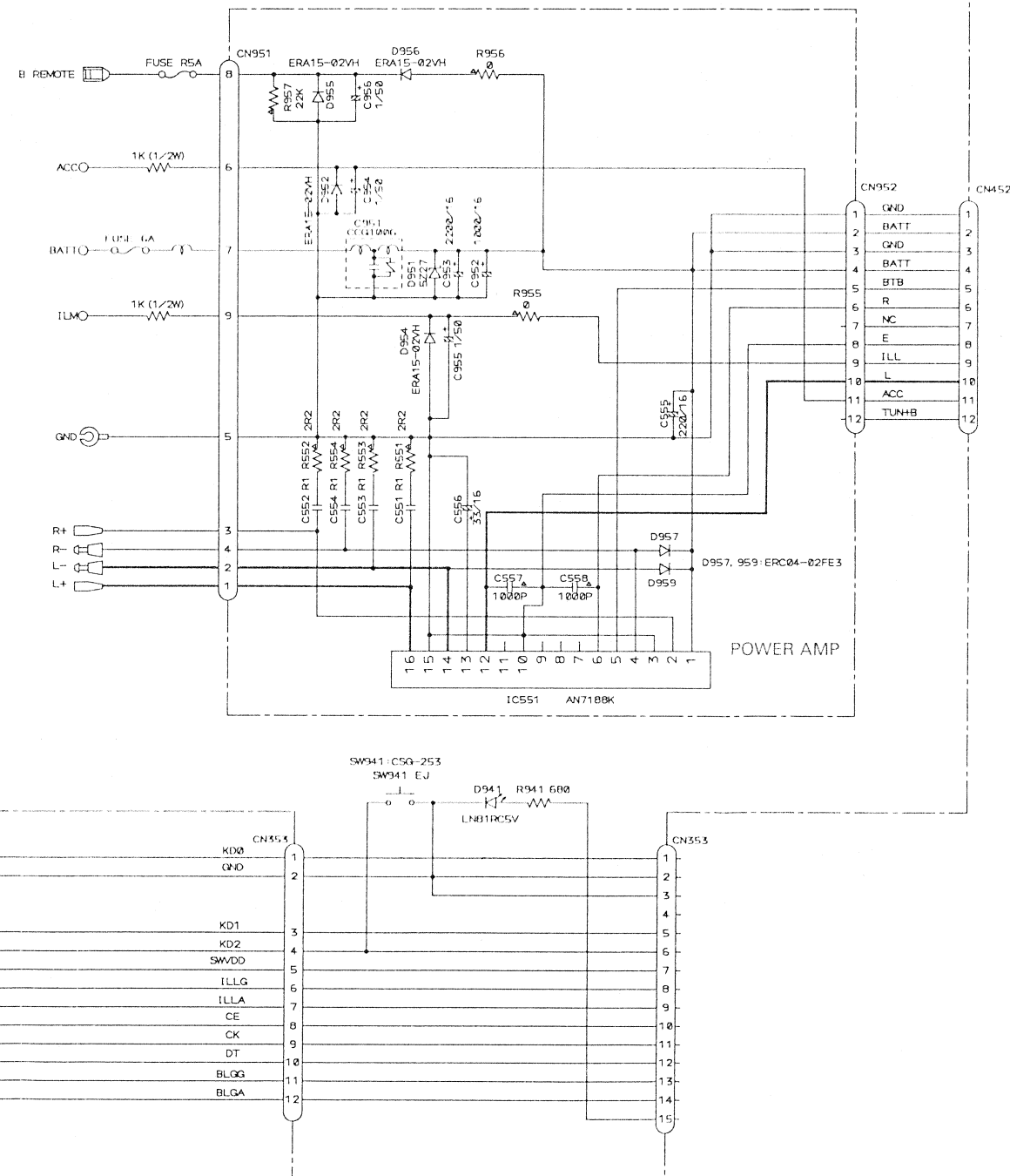
A DISPLAY UNIT



NOTE:

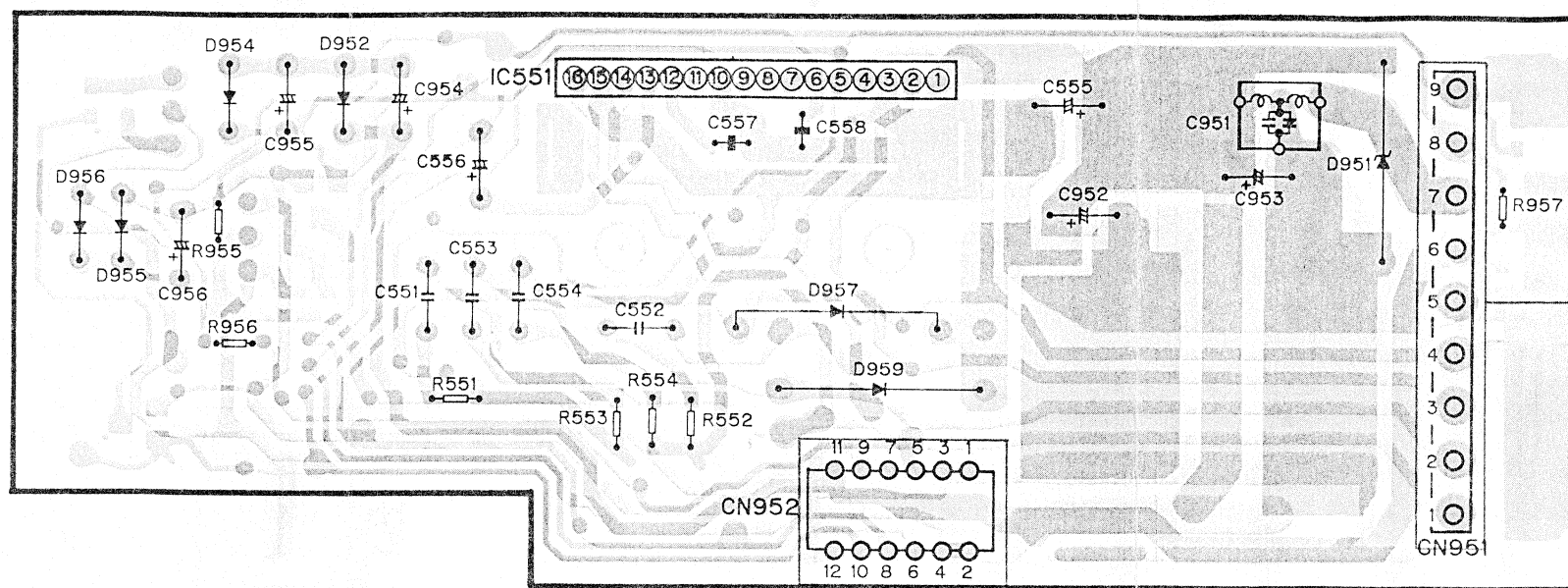
- ⏏: Chip Resistor
 - ⏏: Chip Capacitor
 - ⏏: Chip Diode
 - ⏏: Chip Transistor
- Decimal points for resistor and capacitor fixed values are expressed as:
 2.2 → 2R2
 0.022 → R022

AMP UNIT



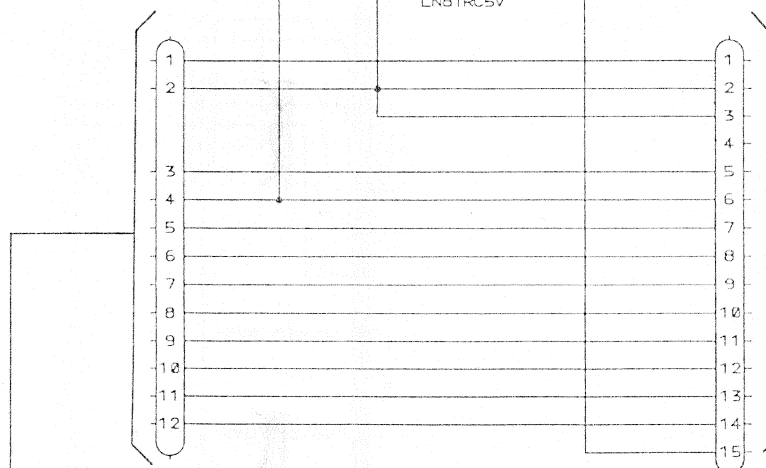
IC. Q AMP UNIT

IC551



SW941:CSG-253
SW941 EJ

D941 R941 680
LN81RC5V



TO CD TUNER UNIT

TO CD TUNER UNIT

IC DISPLAY UNIT

IC901

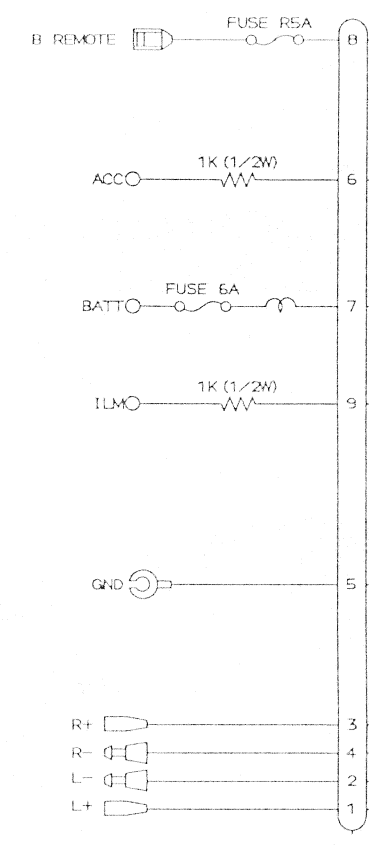
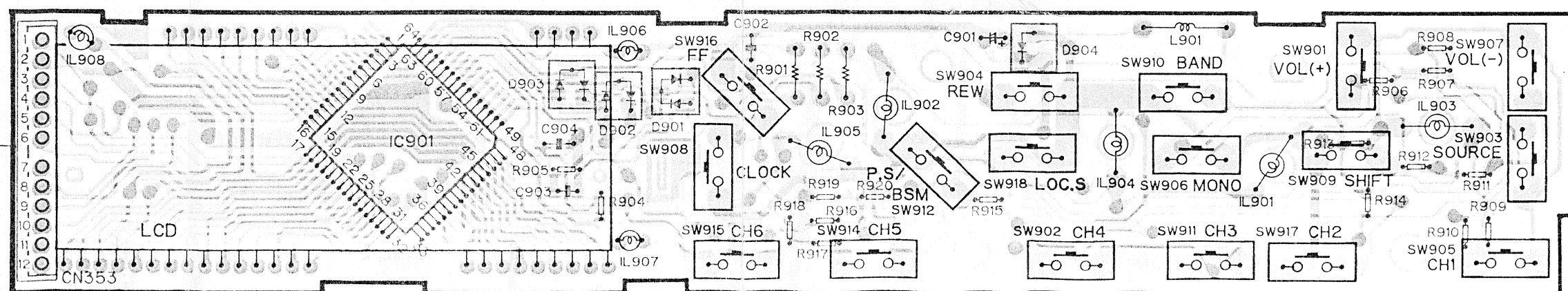


Fig. 62

Fig. 63

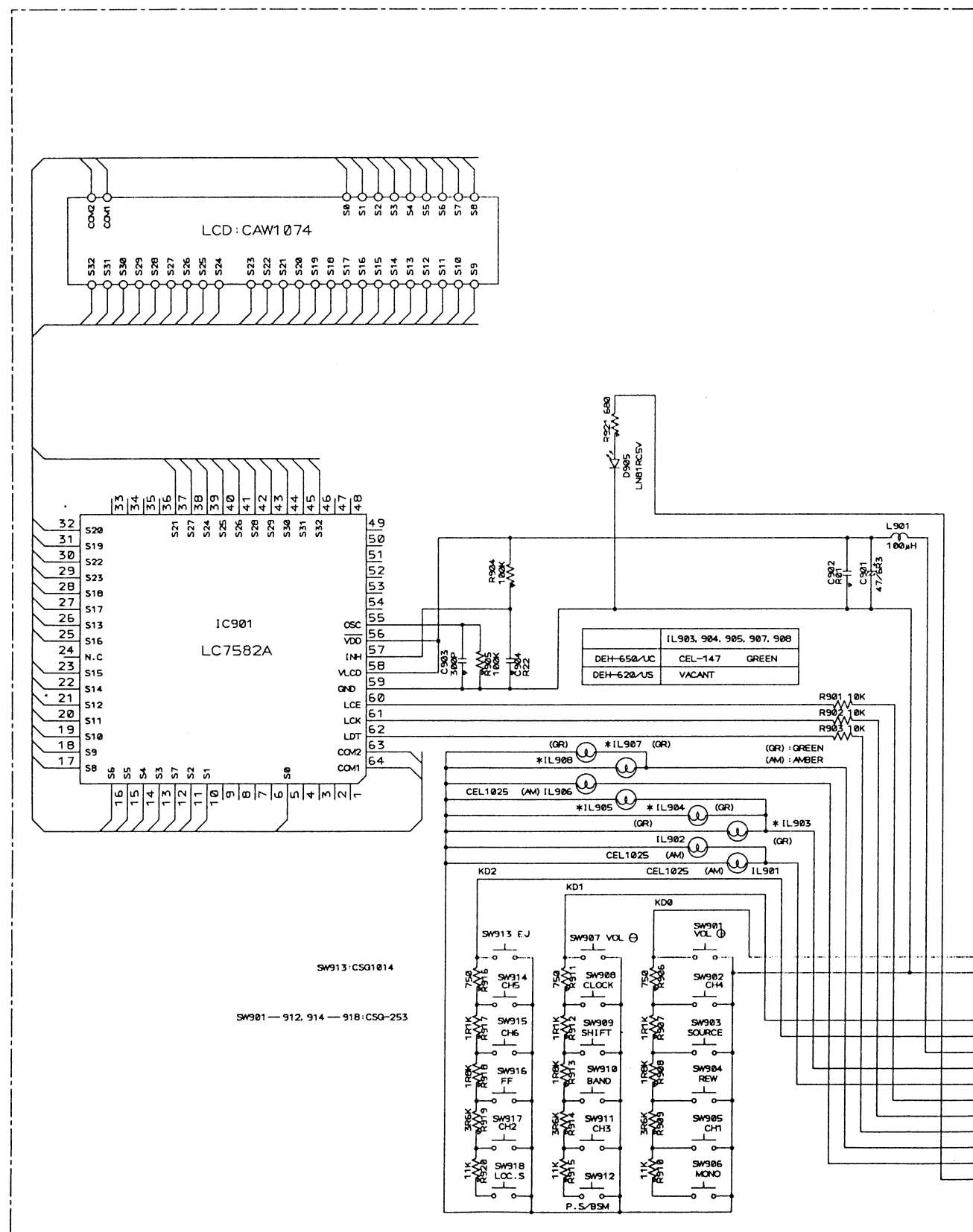
A

DISPLAY UNIT

B

C

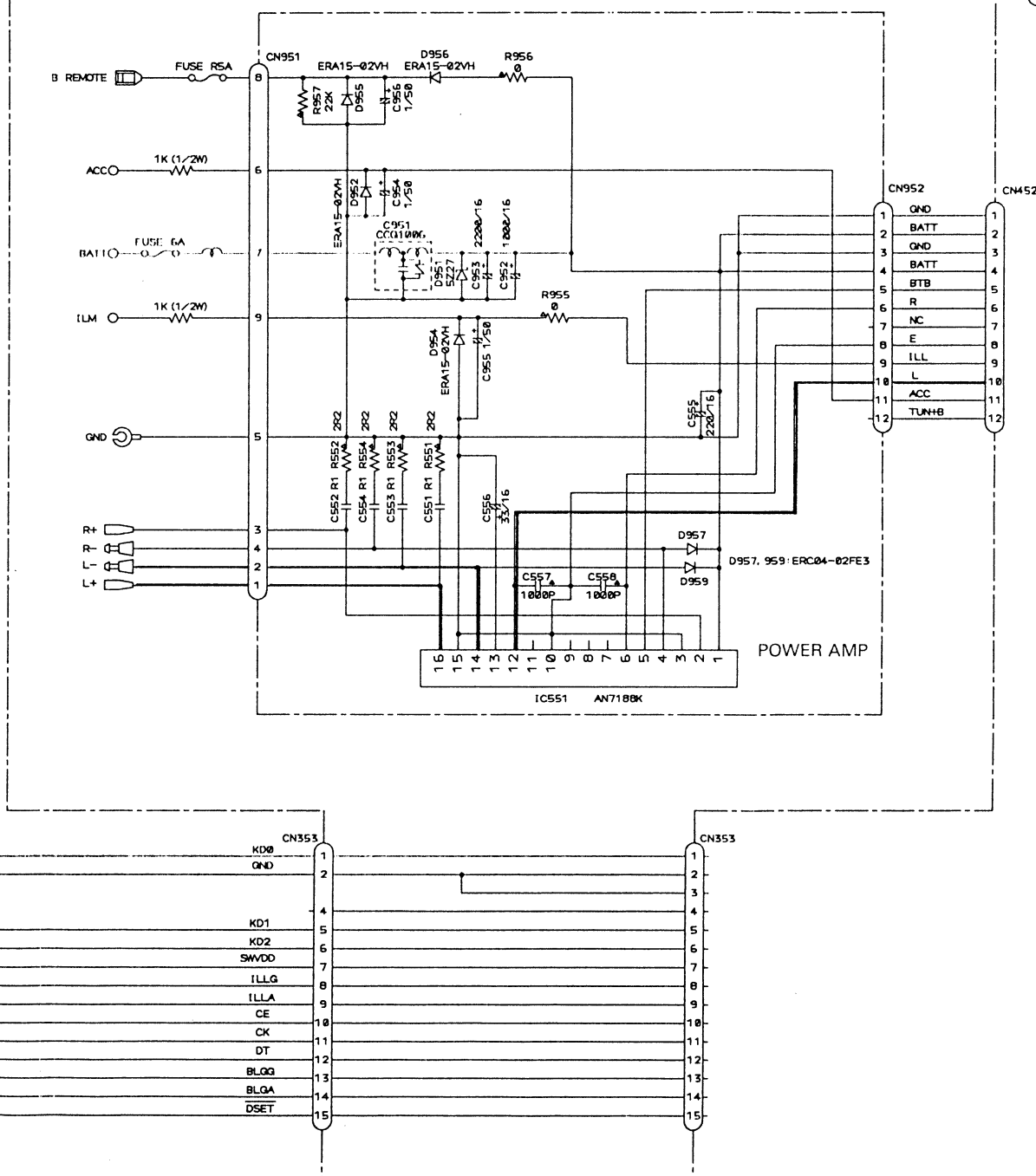
D



NOTE:

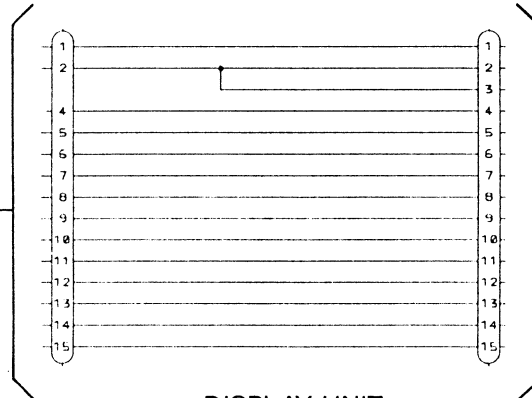
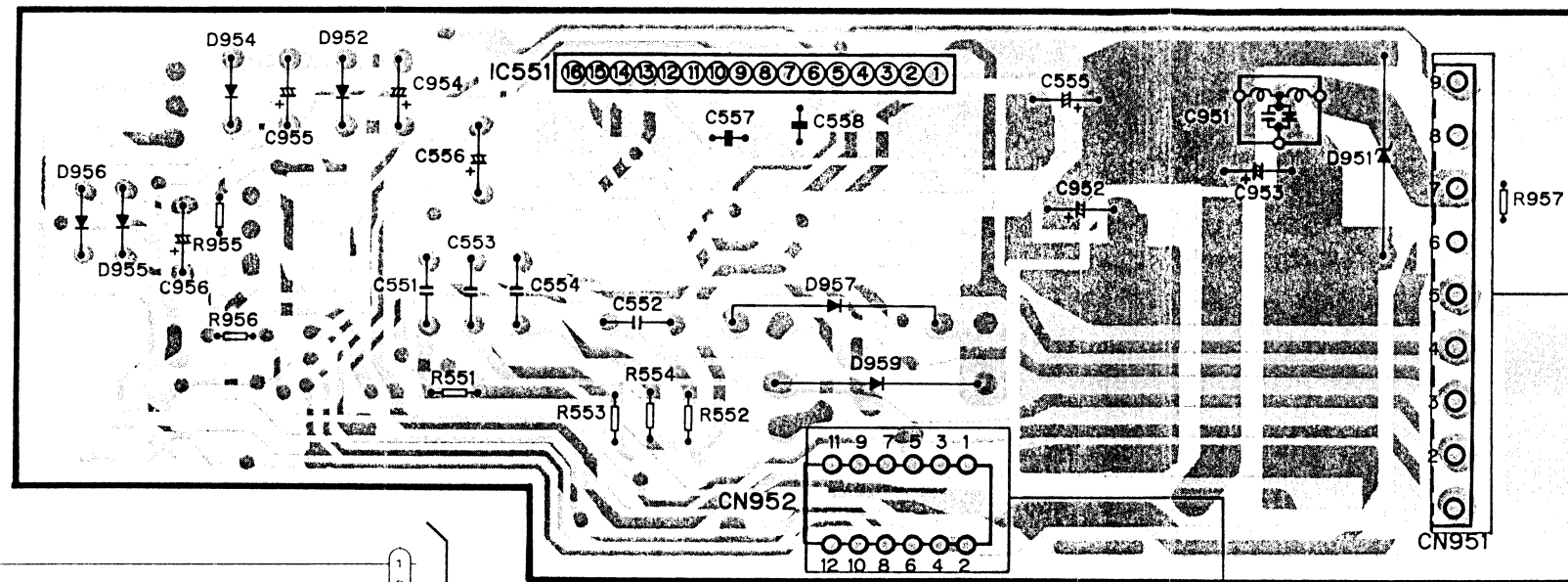
- Chip Resistor: Decimal points for resistor and capacitor fixed values are expressed as: 2.2→2R2
- Chip Capacitor: 0.022→R022
- Chip Diode
- Chip Transistor

AMP UNIT



IC, Q AMP UNIT

IC551



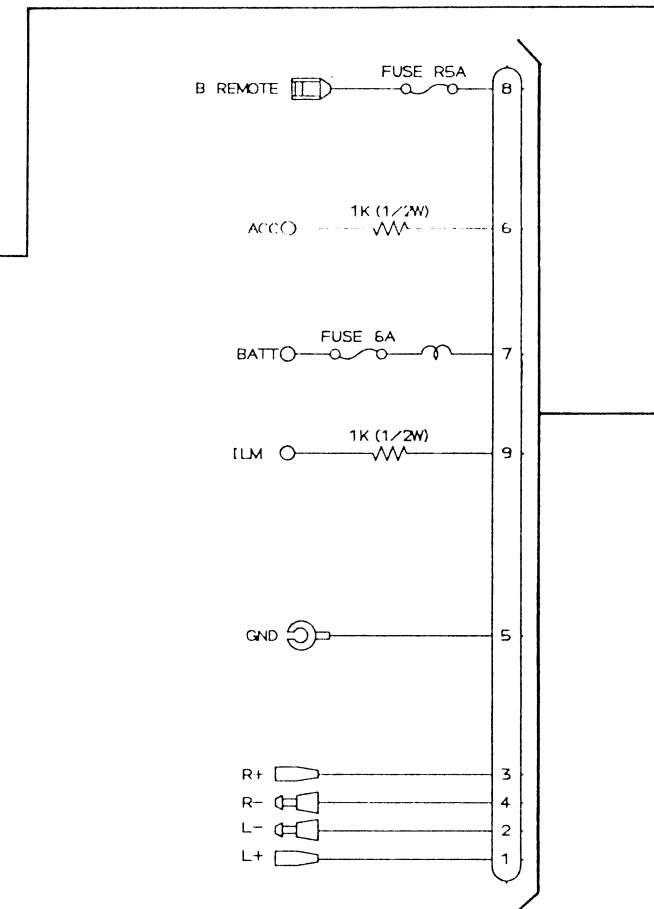
DISPLAY UNIT

IC

IC901

TO CD TUNER UNIT

TO CD TUNER UNIT



A

B

C

D

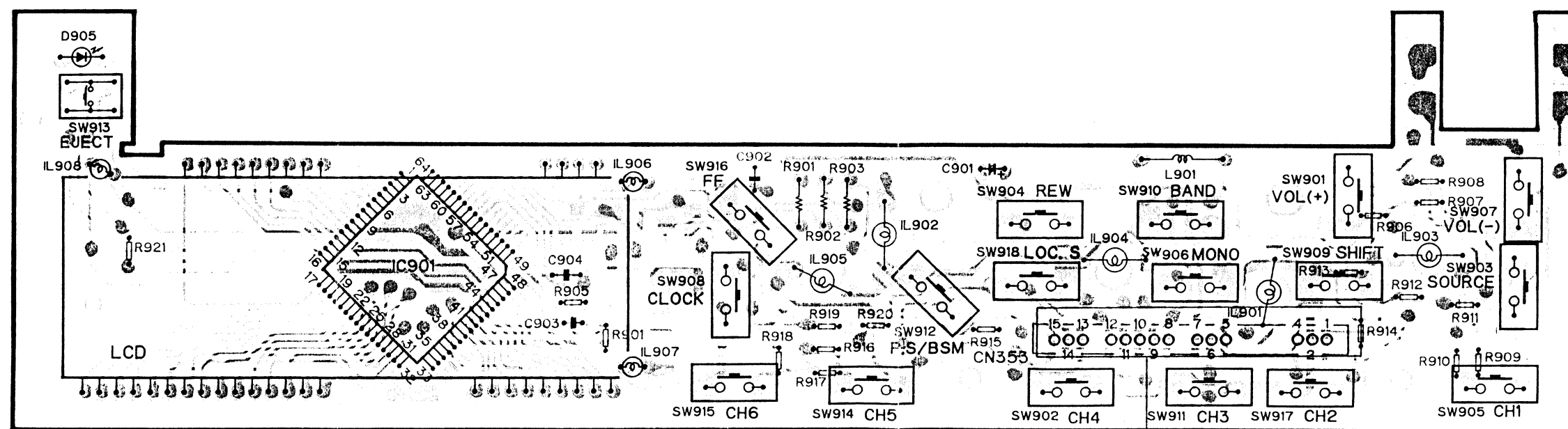


Fig. 65

Fig. 64

• DEH-80/US

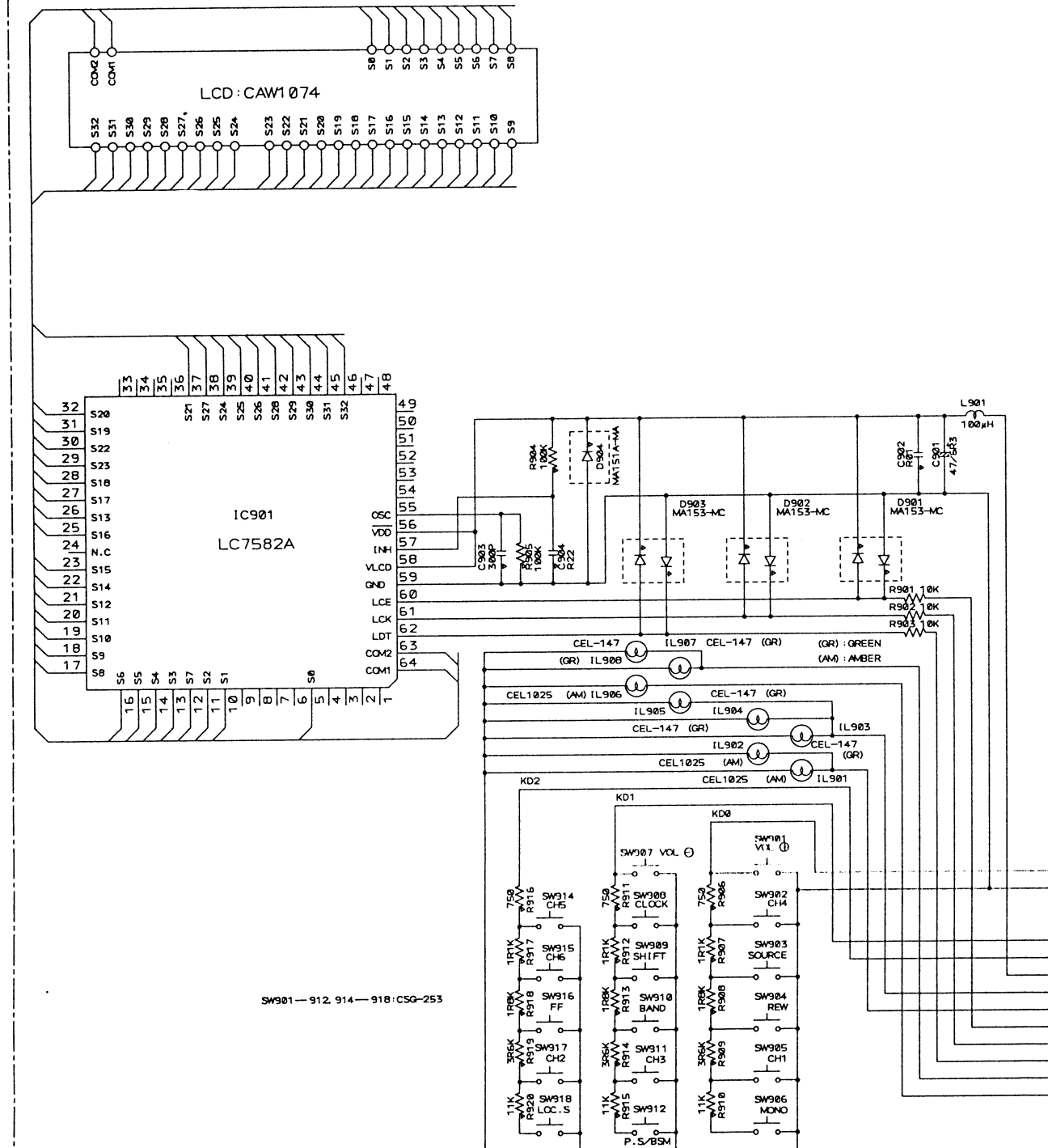
A

DISPLAY UNIT

B

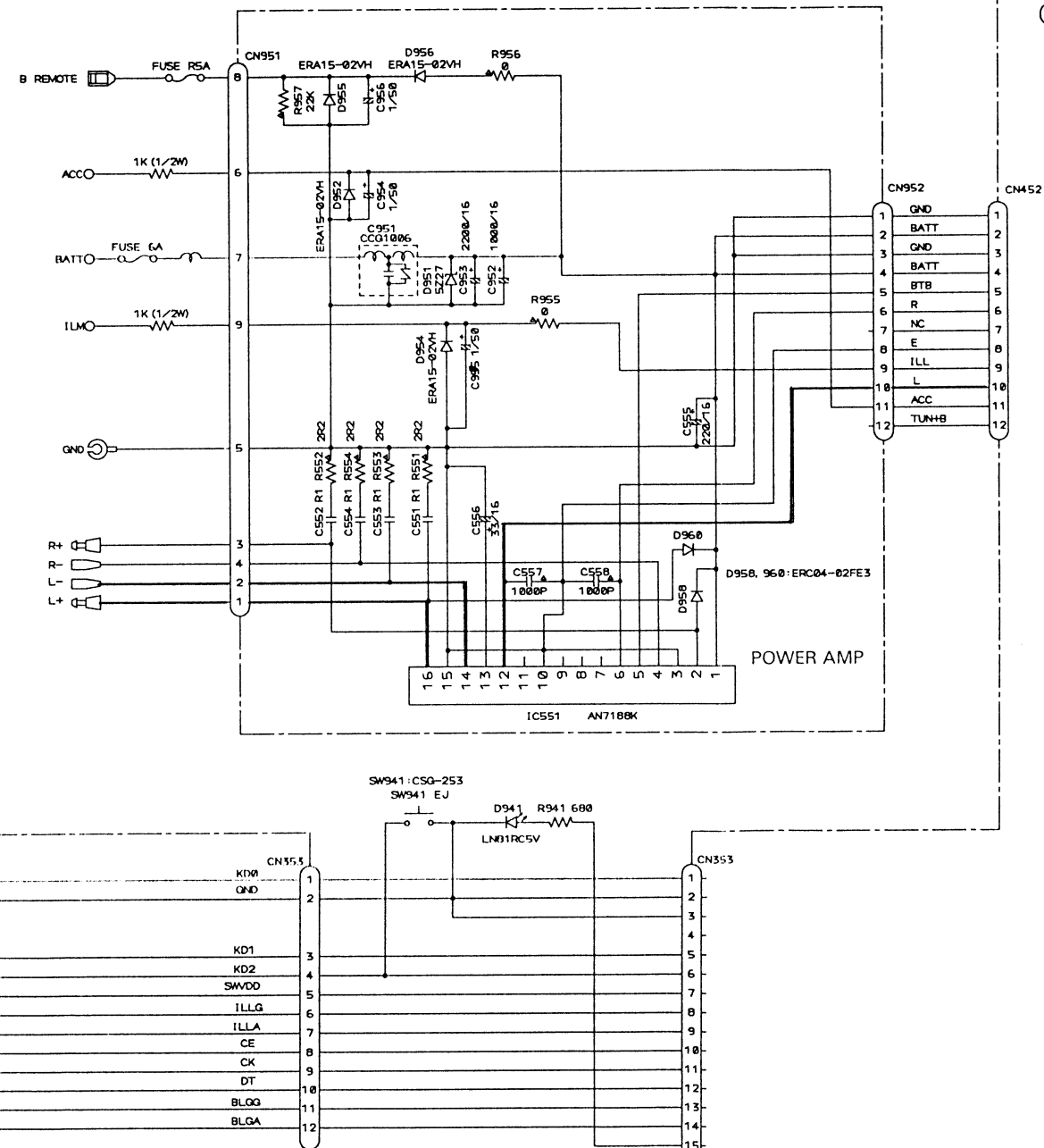
C

D



NOTE:
 Chip Resistor Decimal points for resistor
 Chip Capacitor and capacitor fixed values
 Chip Diode are expressed as:
 Chip Transistor 2.2→2R2
 0.022→R022

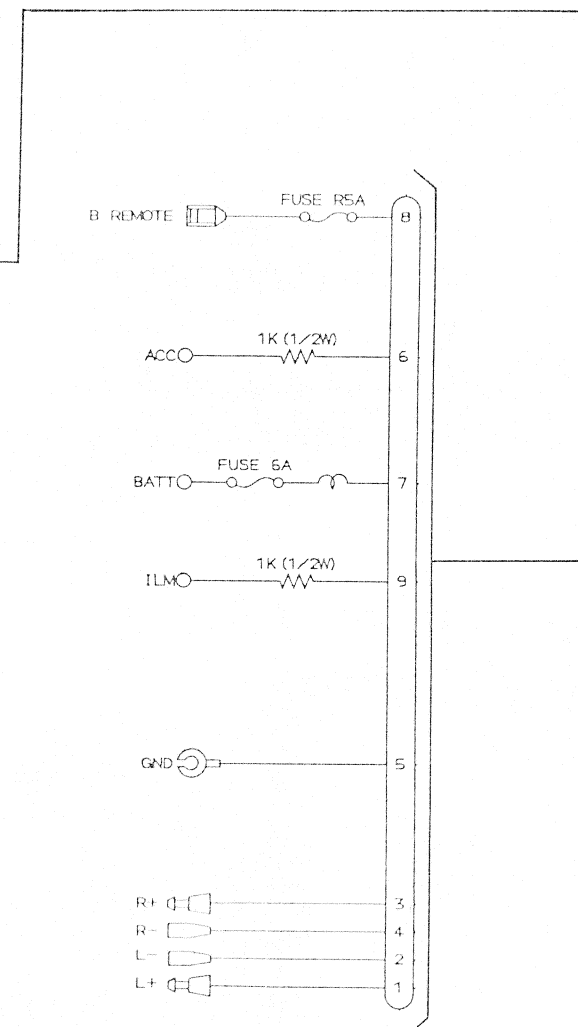
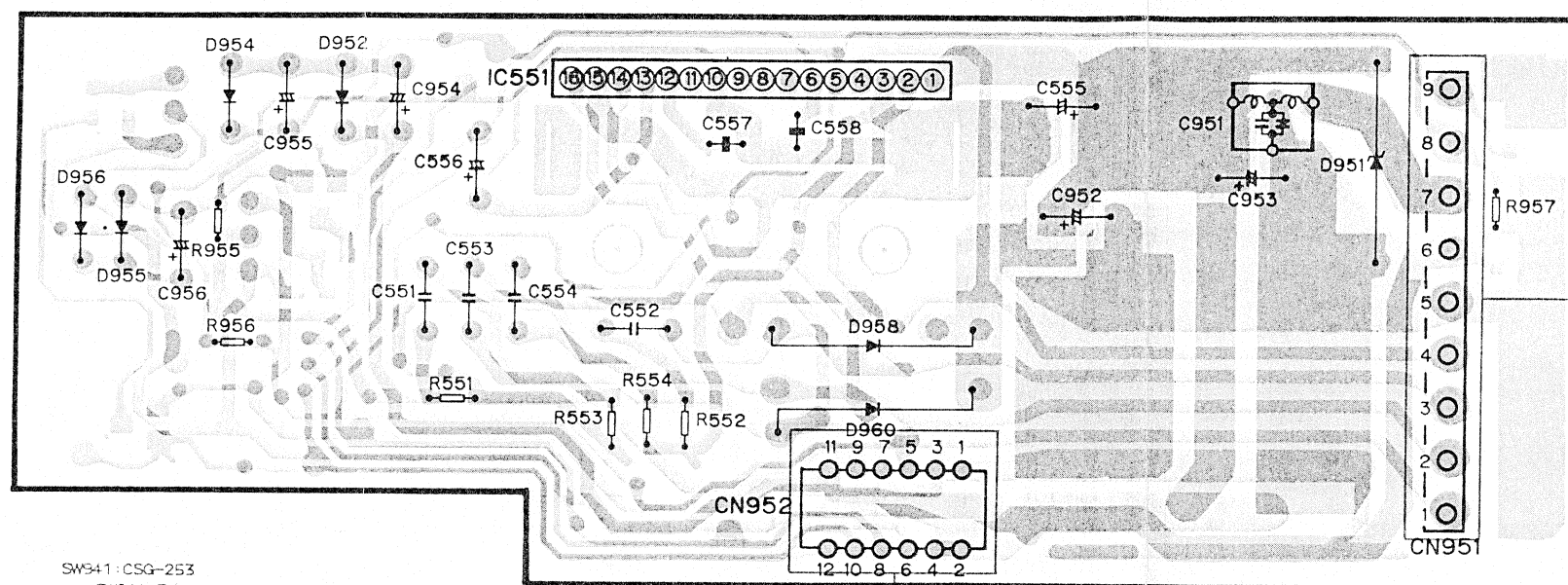
AMP UNIT



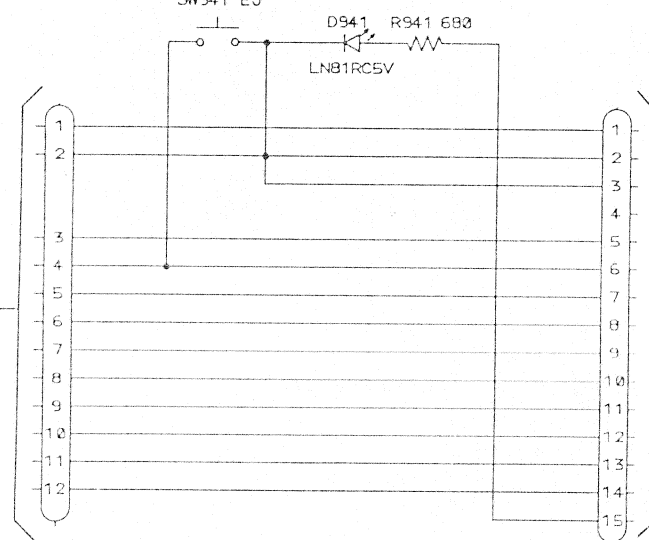
CD TUNER UNIT

IC. Q AMP UNIT

IC551



SW941: CSG-253
SW941: EJ



TO CD TUNER UNIT

TO CD TUNER UNIT

DISPLAY UNIT

IC

IC901

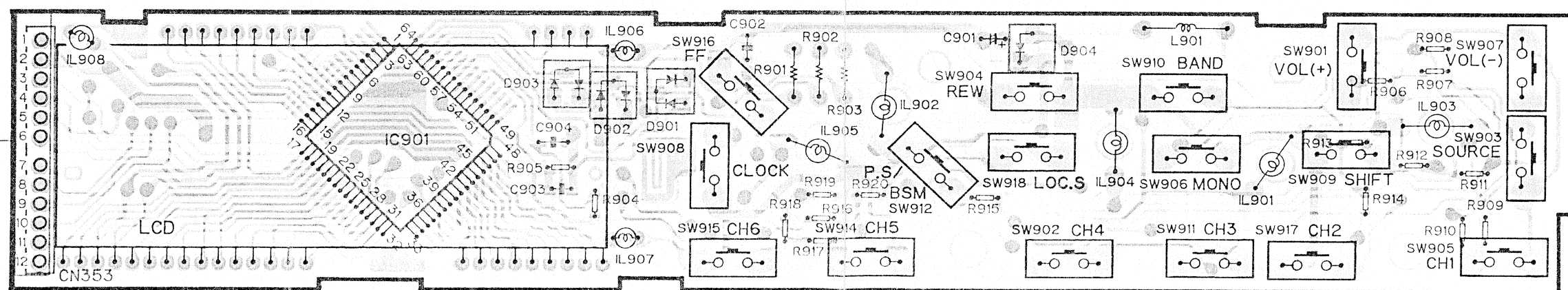


Fig. 67

• DEH-700SDK/WG, DEH-700/EW

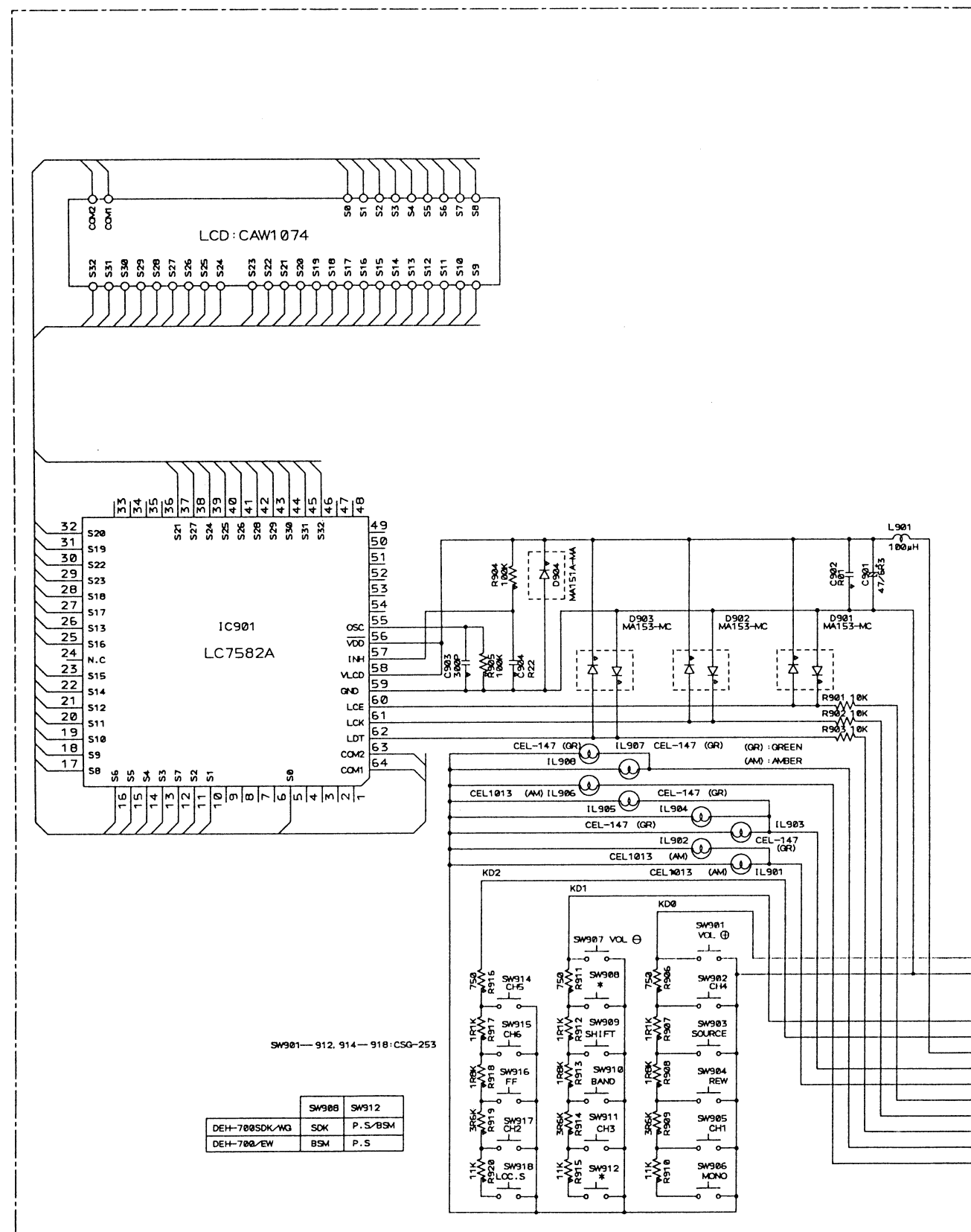
A

DISPLAY UNIT

B

C

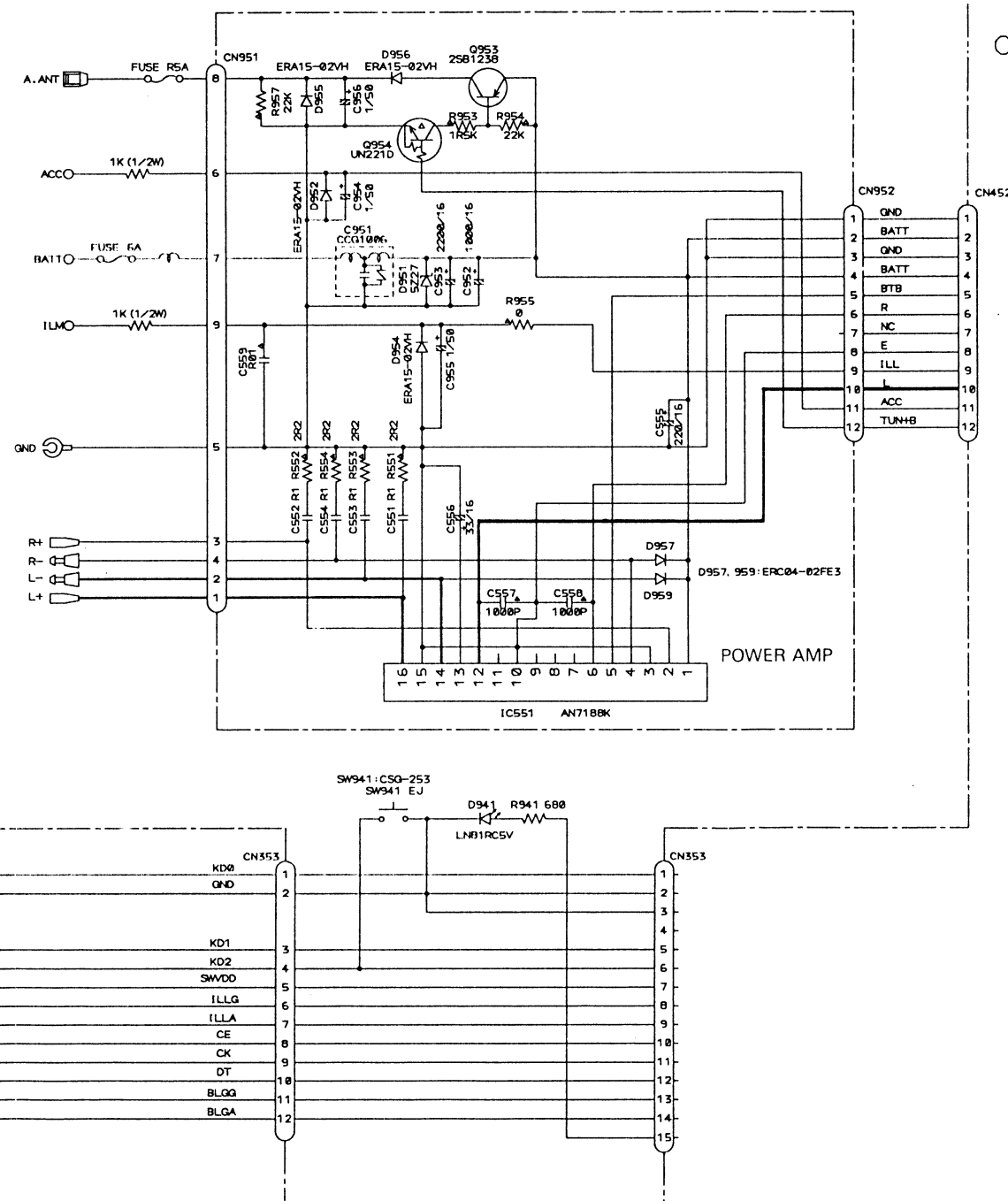
D



NOTE:

- NOTE:
- Chip Resistor
 - Chip Capacitor
 - Chip Diode
 - Chip Transistor
- Decimal points for resistor and capacitor fixed values are expressed as:
- 2.2→2R2
 - 0.022→R022

AMP UNIT



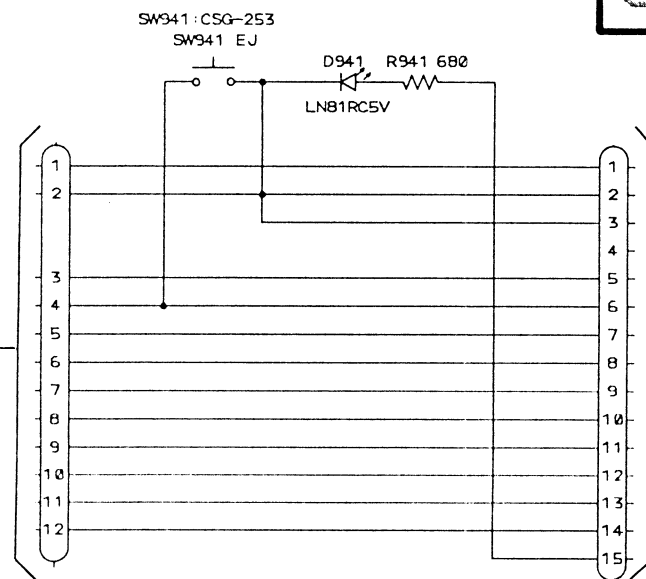
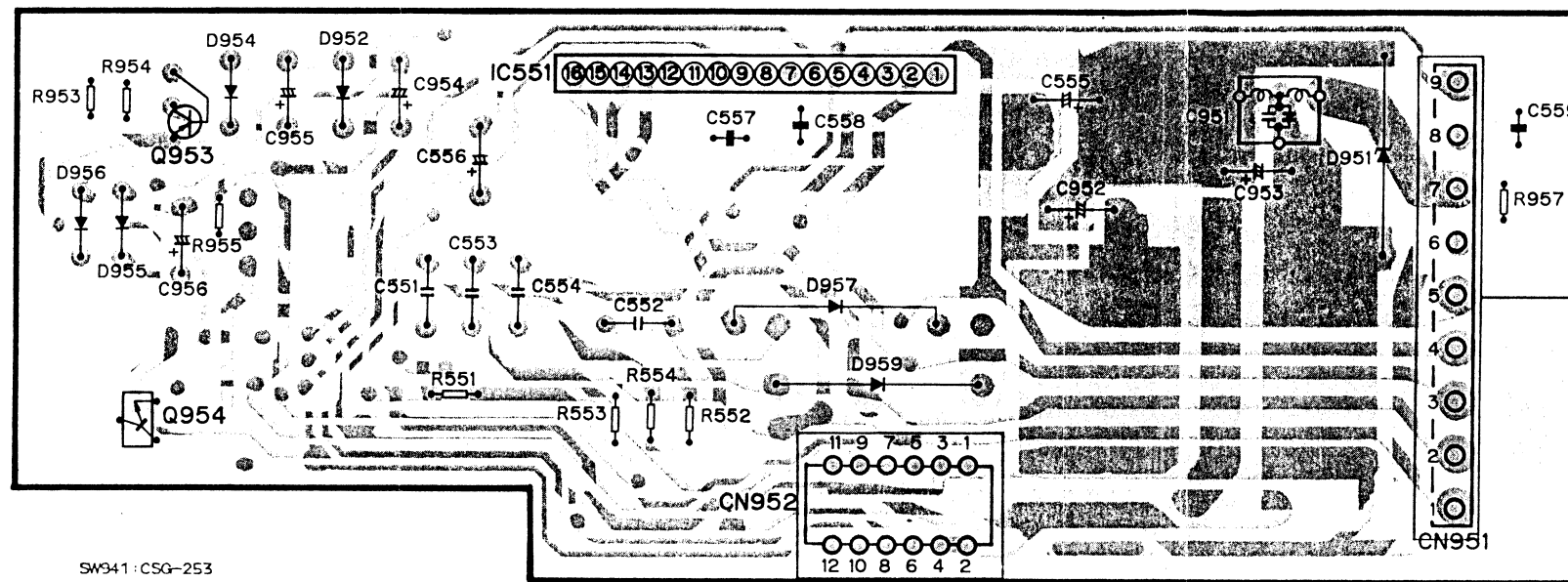
PRE OUT

CD TUNER UNIT

AMP UNIT

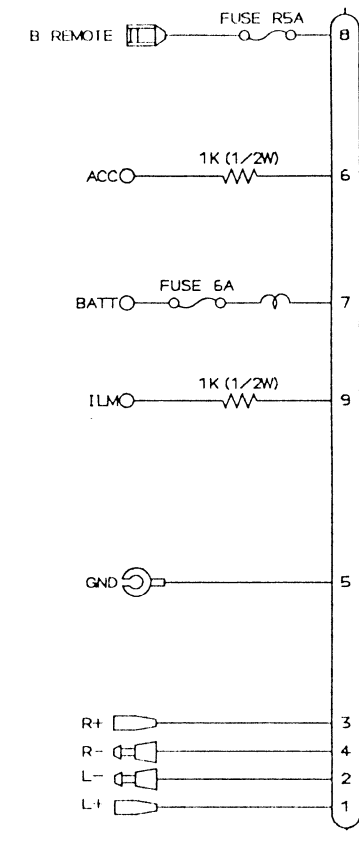
IC. Q Q954 Q953

IC551



TO CD TUNER UNIT

TO CD TUNER UNIT



DISPLAY UNIT

IC

IC901

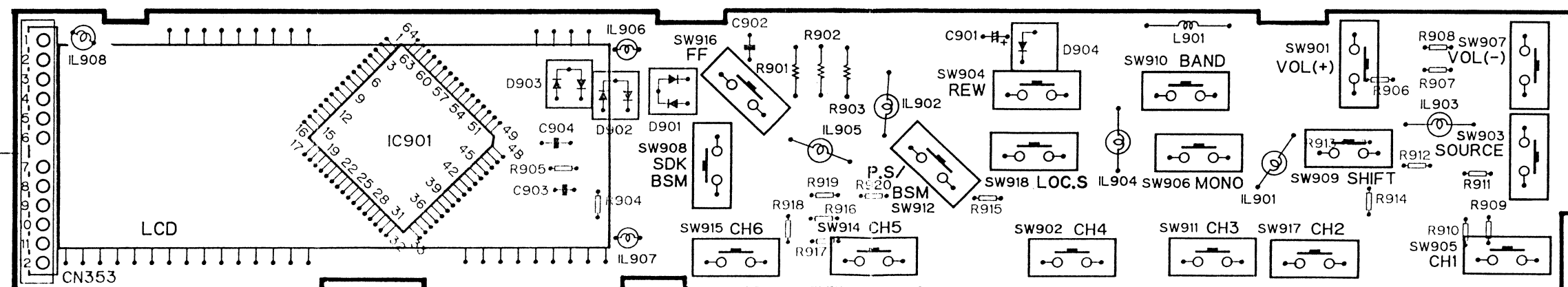


Fig 69

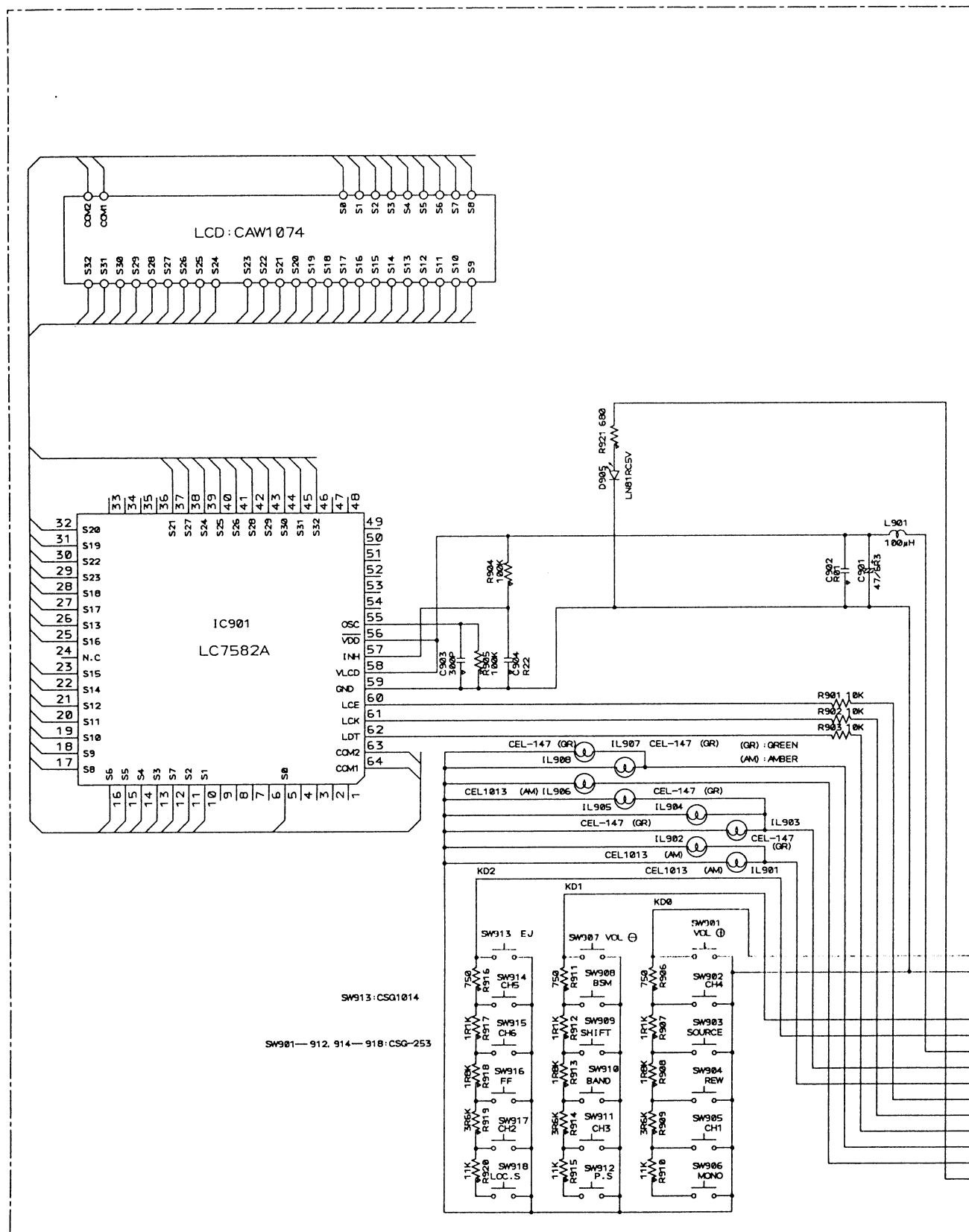
• DEH-600/EW

A DISPLAY UNIT

B

C

D

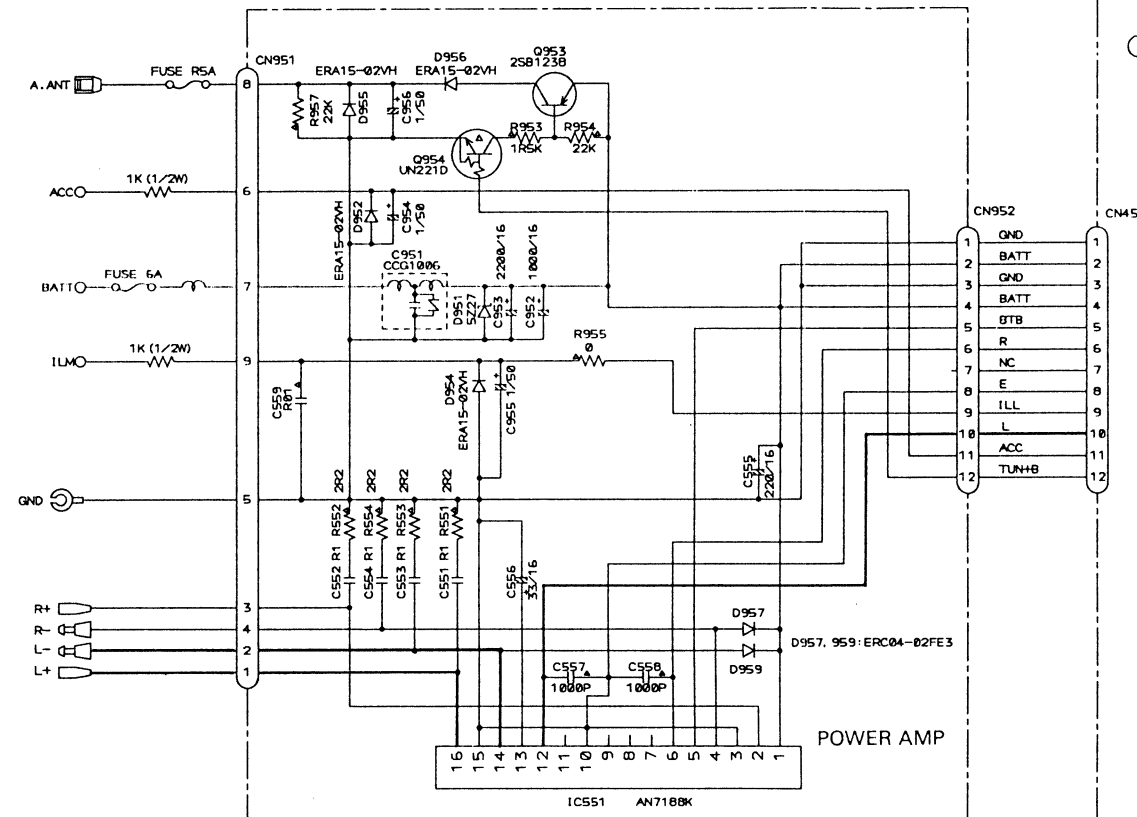


NOTE:

- Chip Resistor
- Chip Capacitor
- Chip Diode
- Chip Transistor

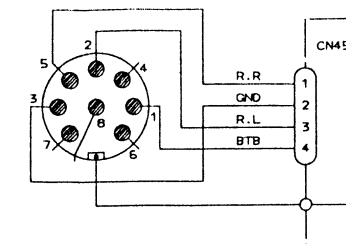
Decimal points for resistor and capacitor fixed values are expressed as:
 2.2 → 2R2
 0.022 → R022

AMP UNIT



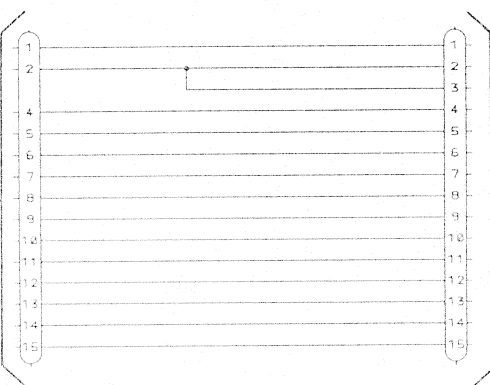
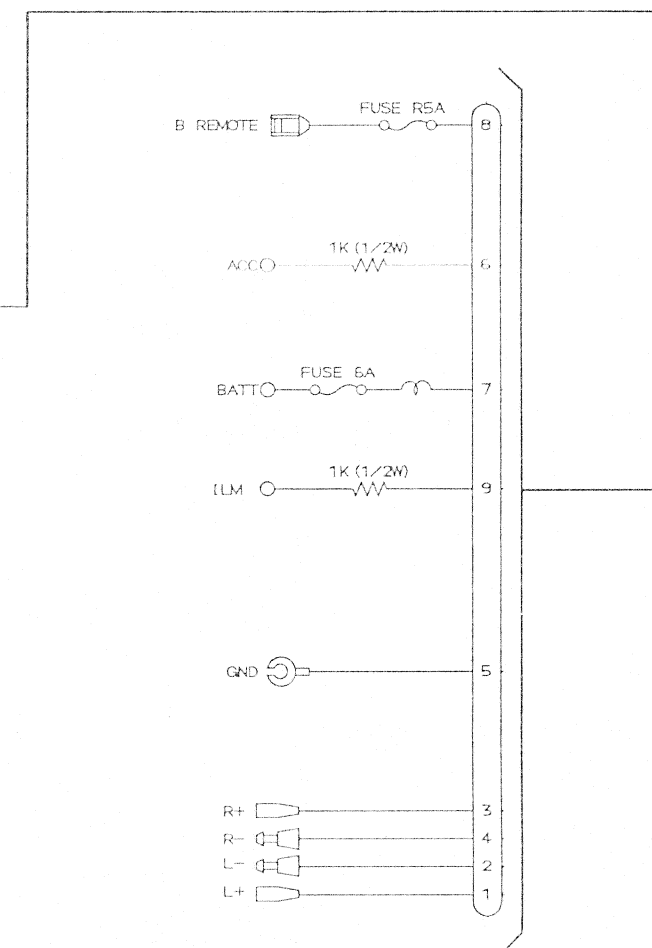
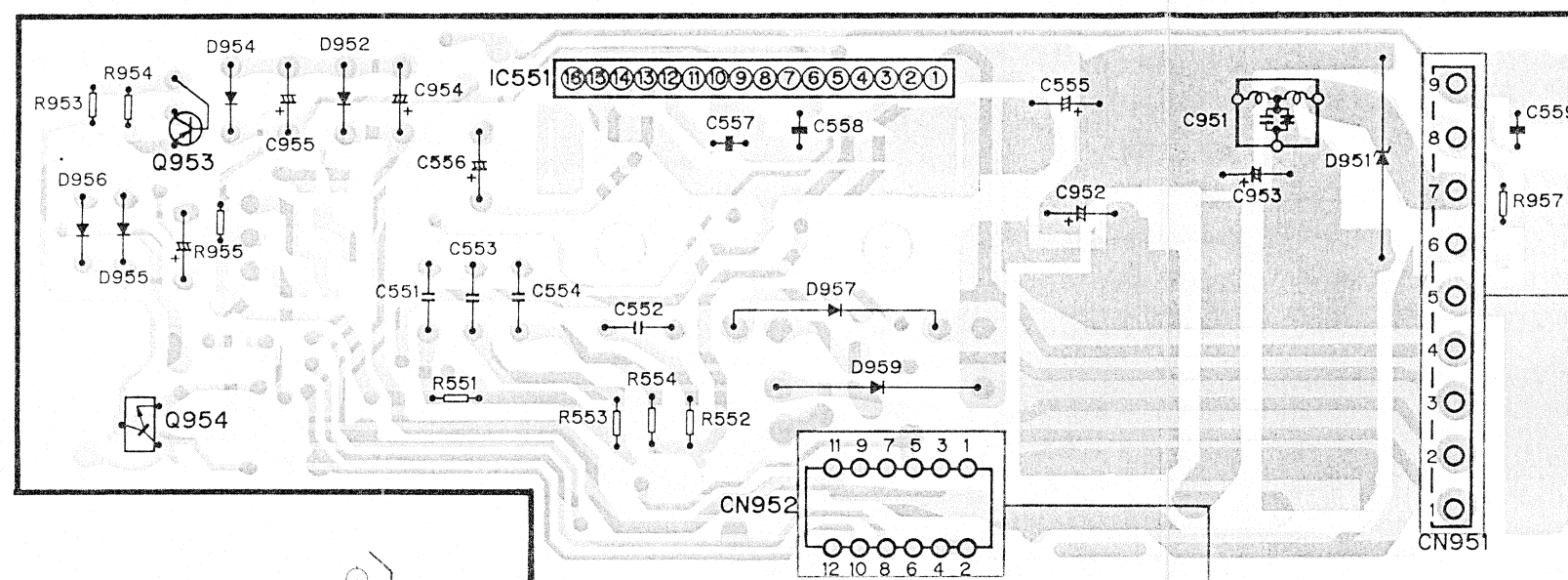
POWER AMP

CD TUNER UNIT



AMP UNIT
IC, Q Q954 Q953

IC551



DISPLAY UNIT
IC

IC901

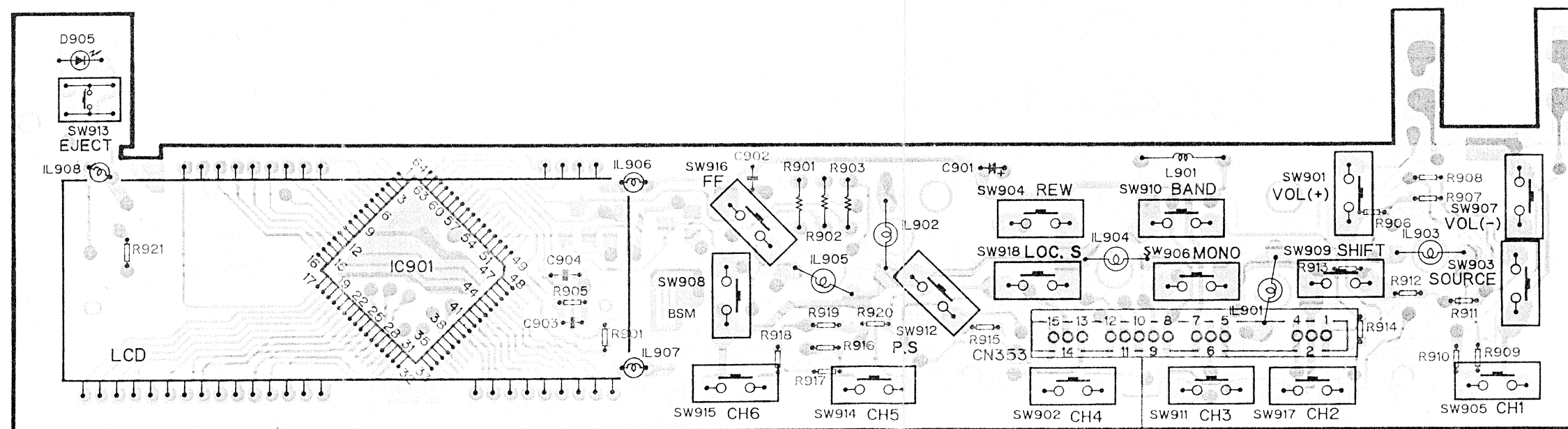


Fig. 71

• FM/AM Tuner Unit (DEH-750/UC, DEH-650/UC, DEH-80/US)

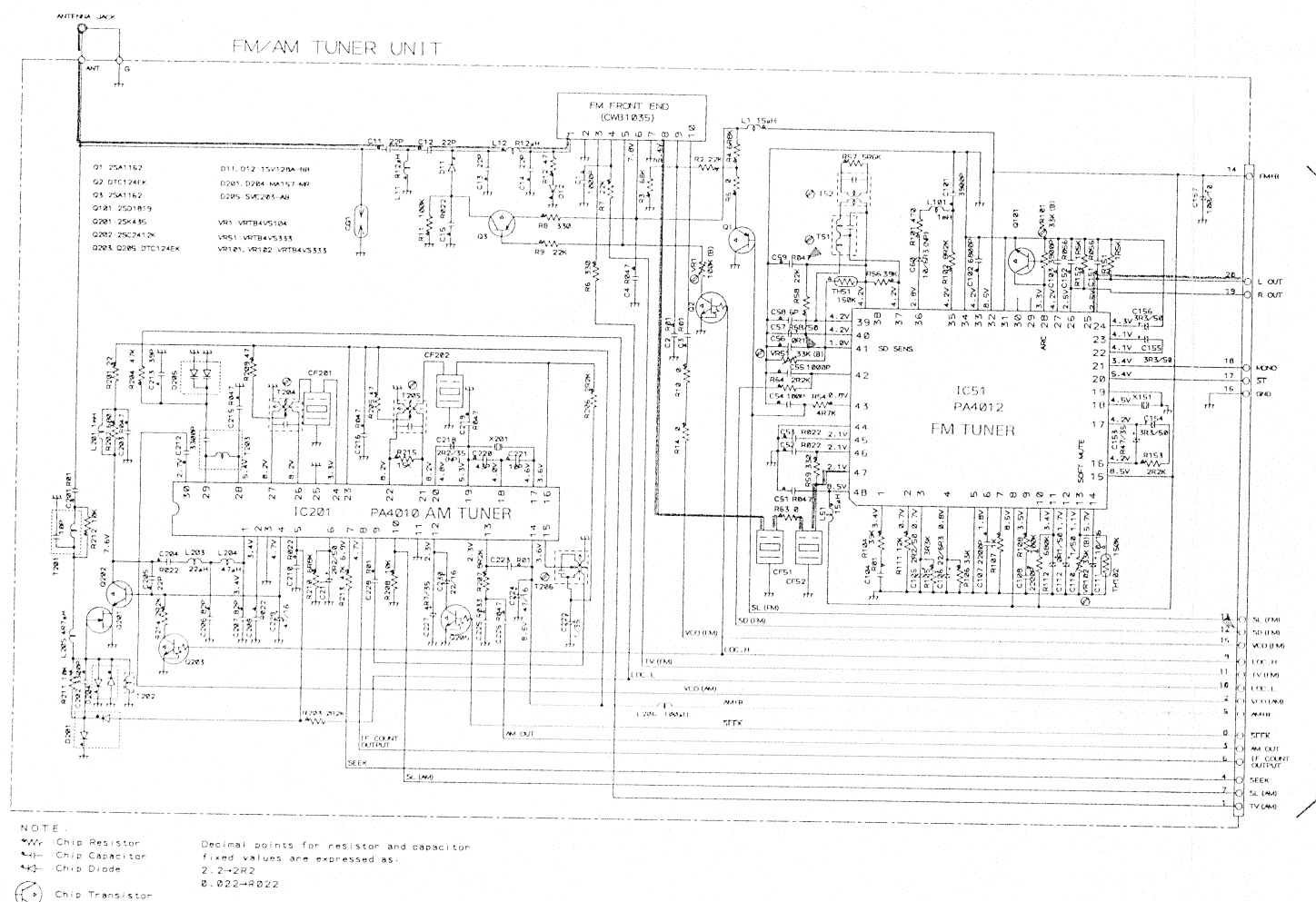


Fig. 72

• FM/AM Tuner Unit (DEH-620/US)

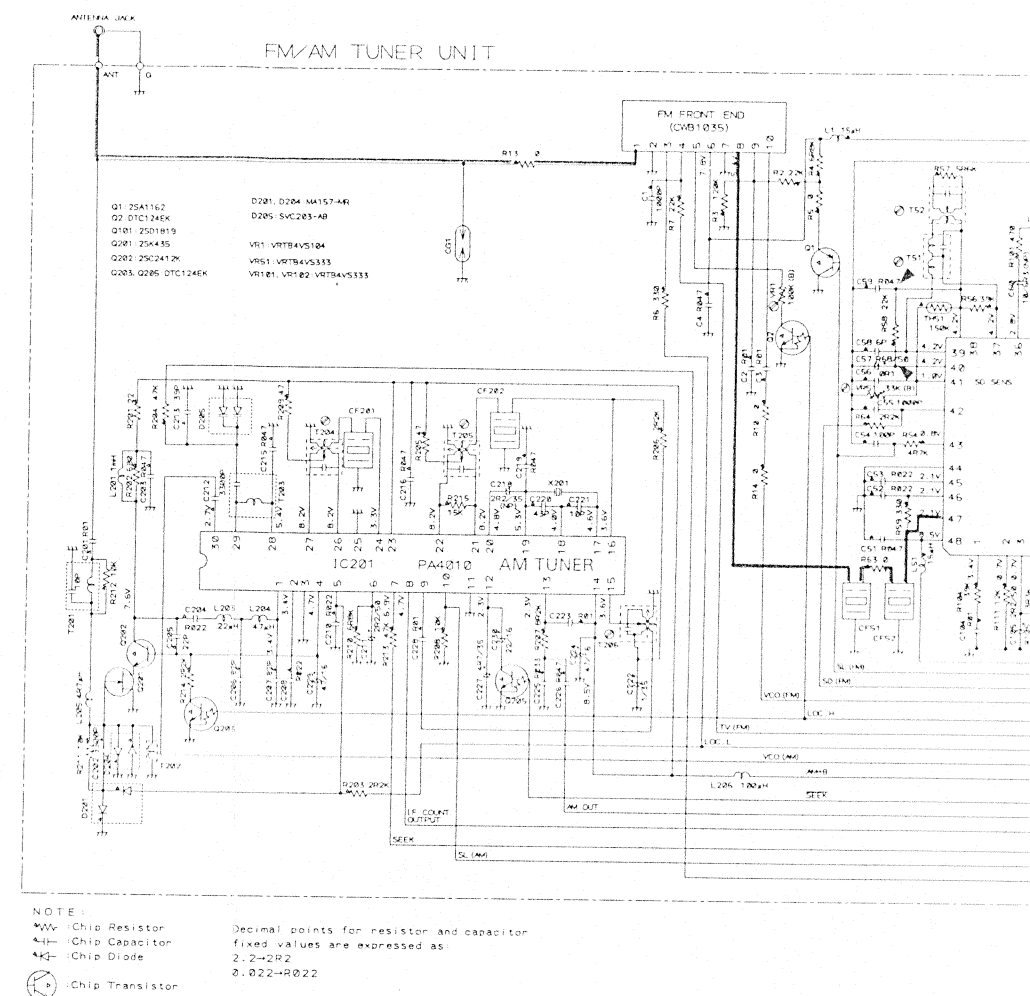
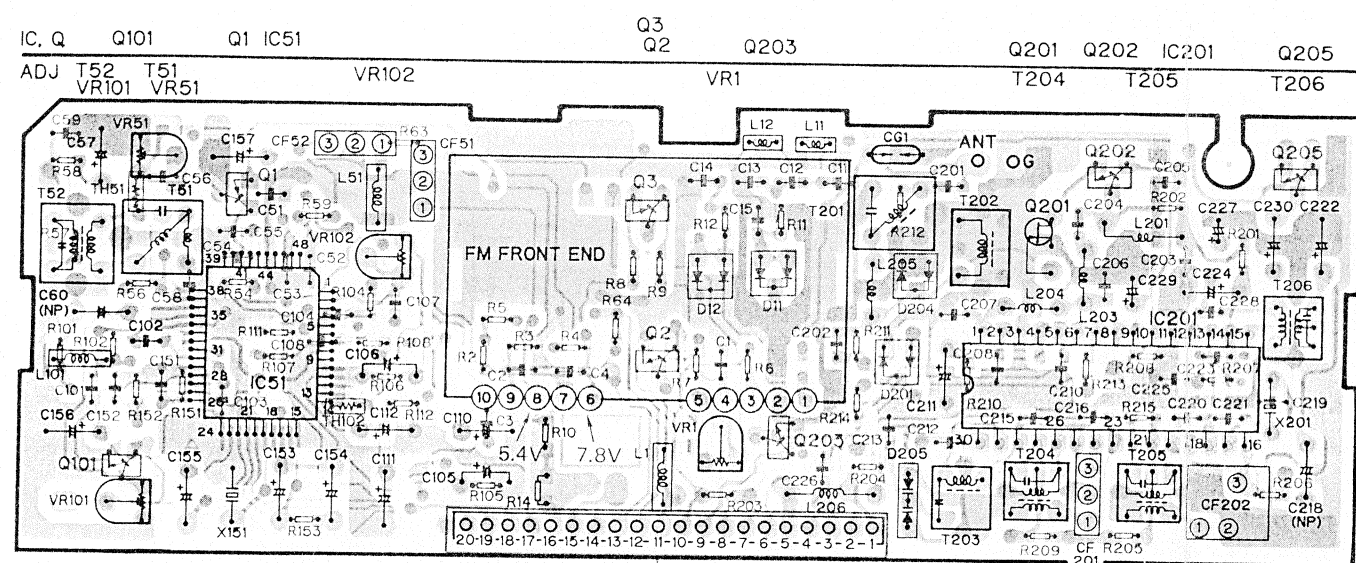
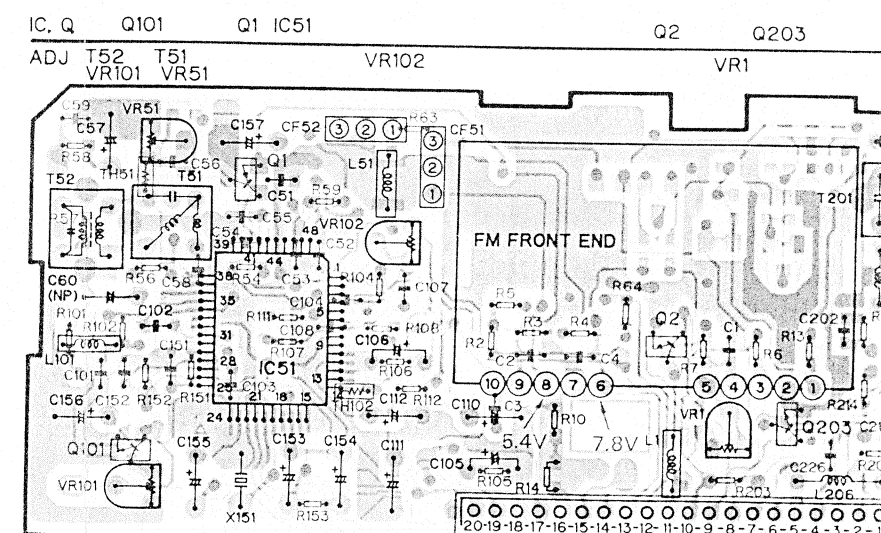


Fig. 73



TO CD TUNER UNIT



TO CD TUNER UNIT

• FM/AM Tuner Unit (DEH-750/ES)

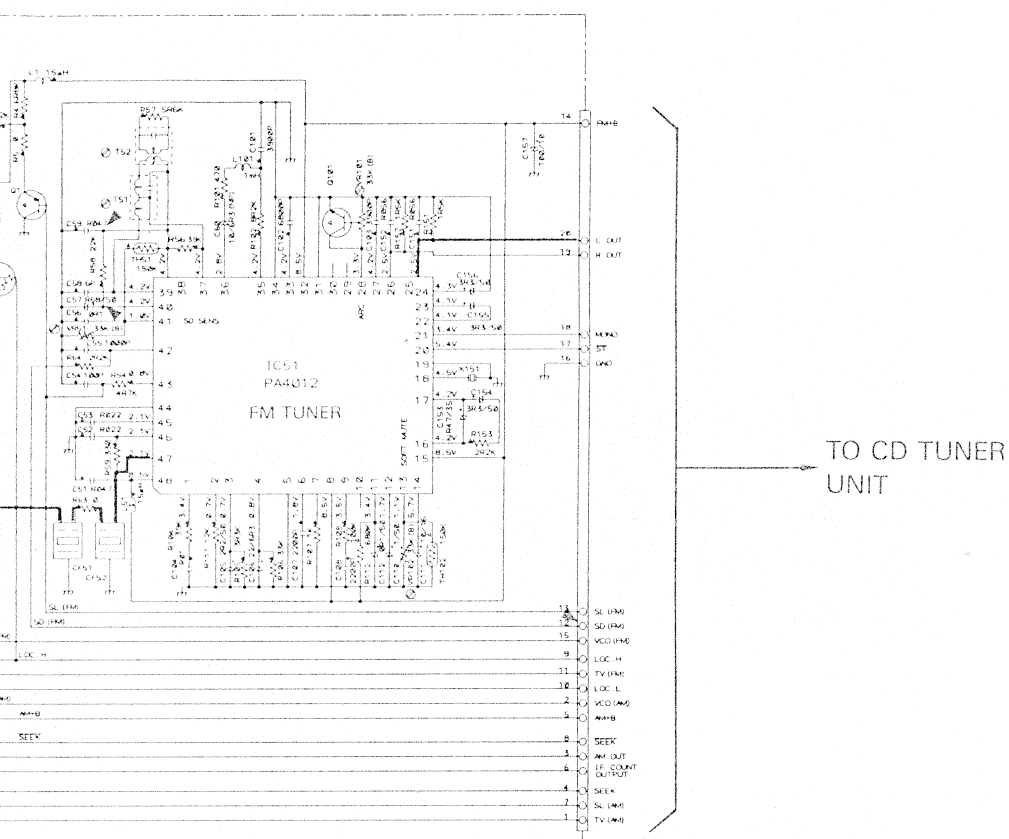
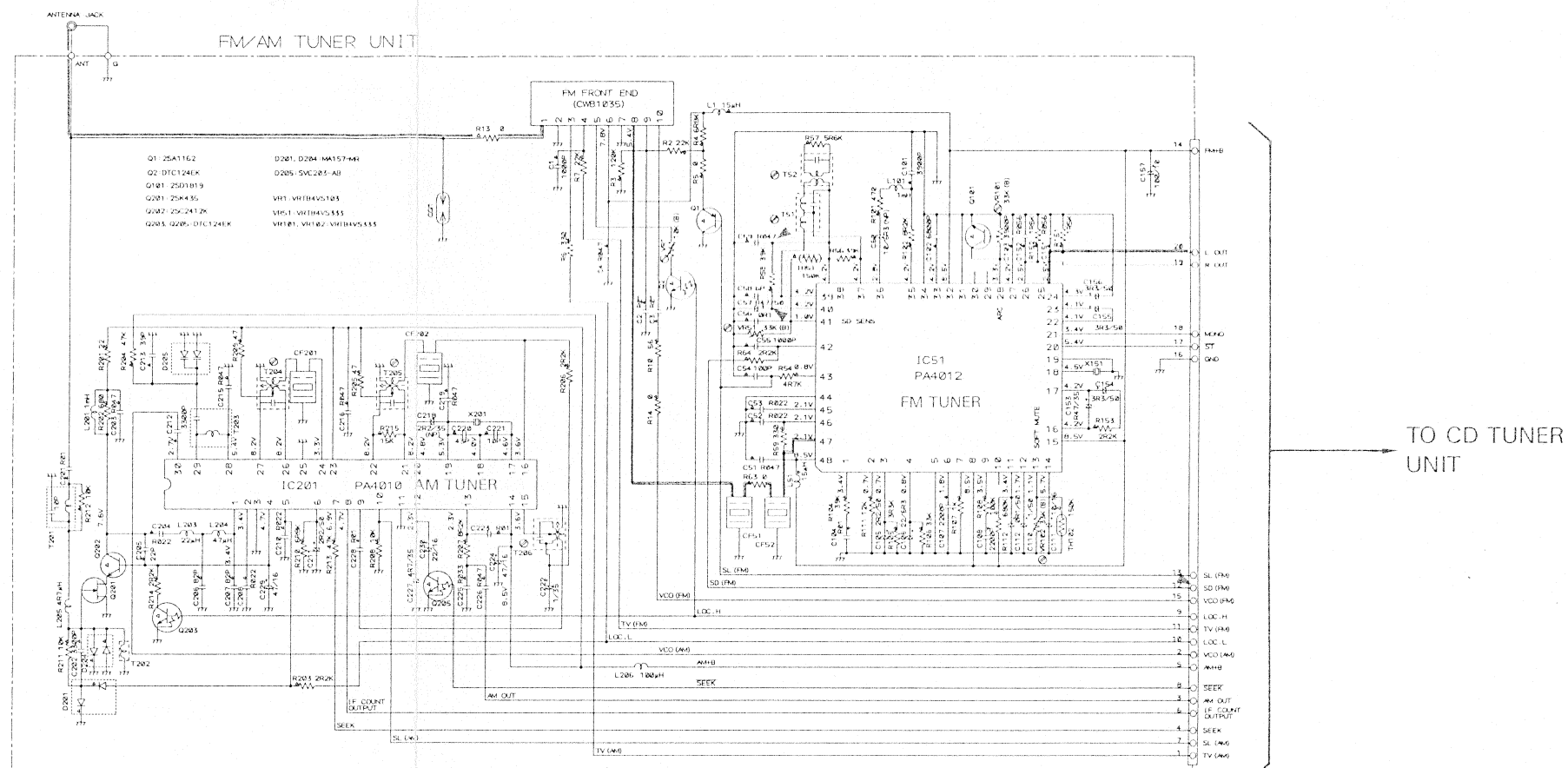


Fig. 74



NOTE:
 ● Chip Resistor
 ● Chip Capacitor
 ● Chip Diode
 ● Chip Transistor
 Decimal points for resistor and capacitor fixed values are expressed as:
 2.2K = R22
 0.0022 = K22

Fig. 76

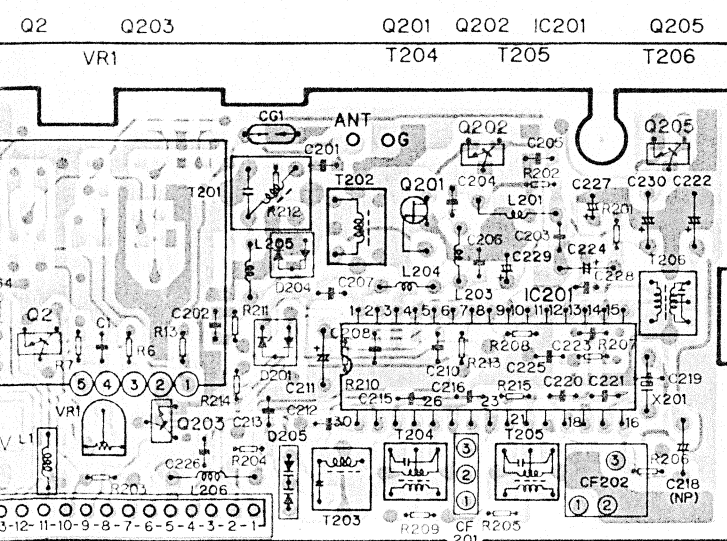


Fig. 75

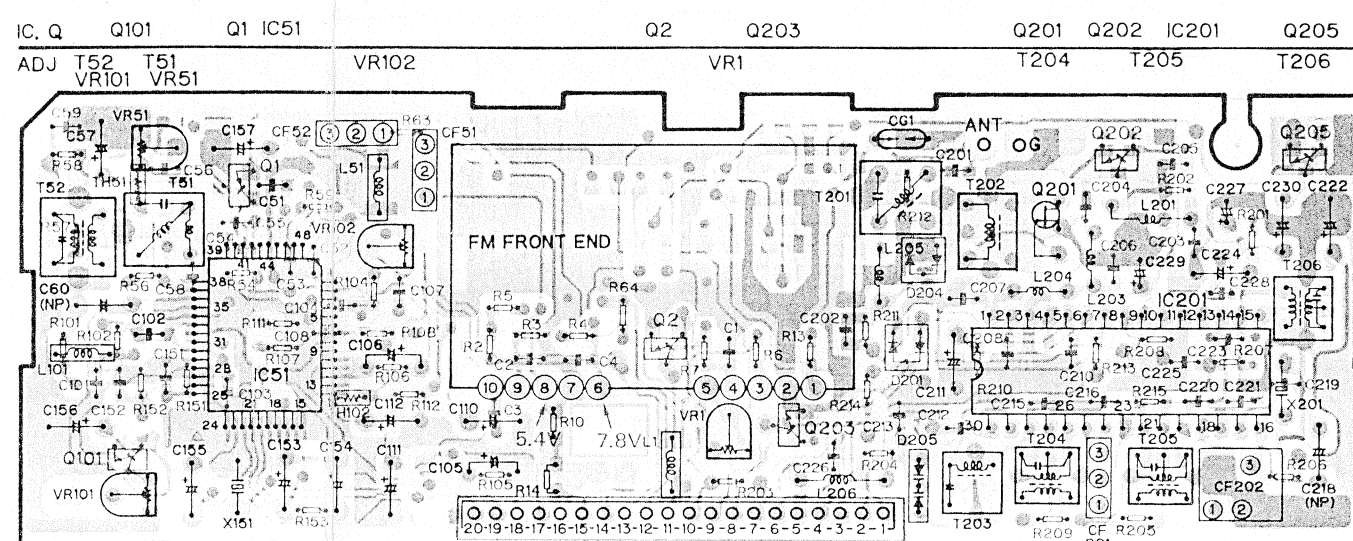


Fig. 77

• FM/AM Tuner Unit (DEH-700SDK/WG)

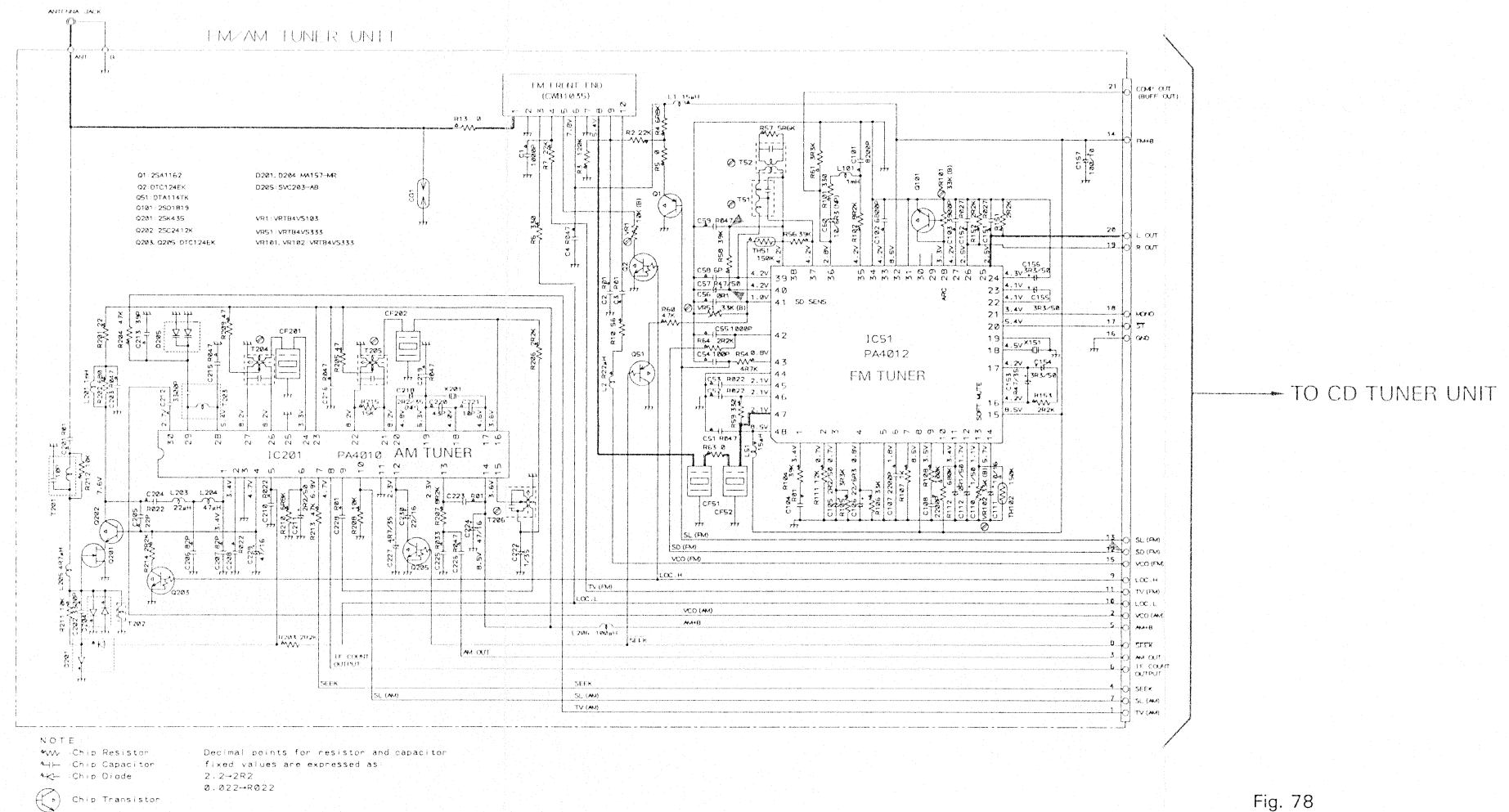


Fig. 78

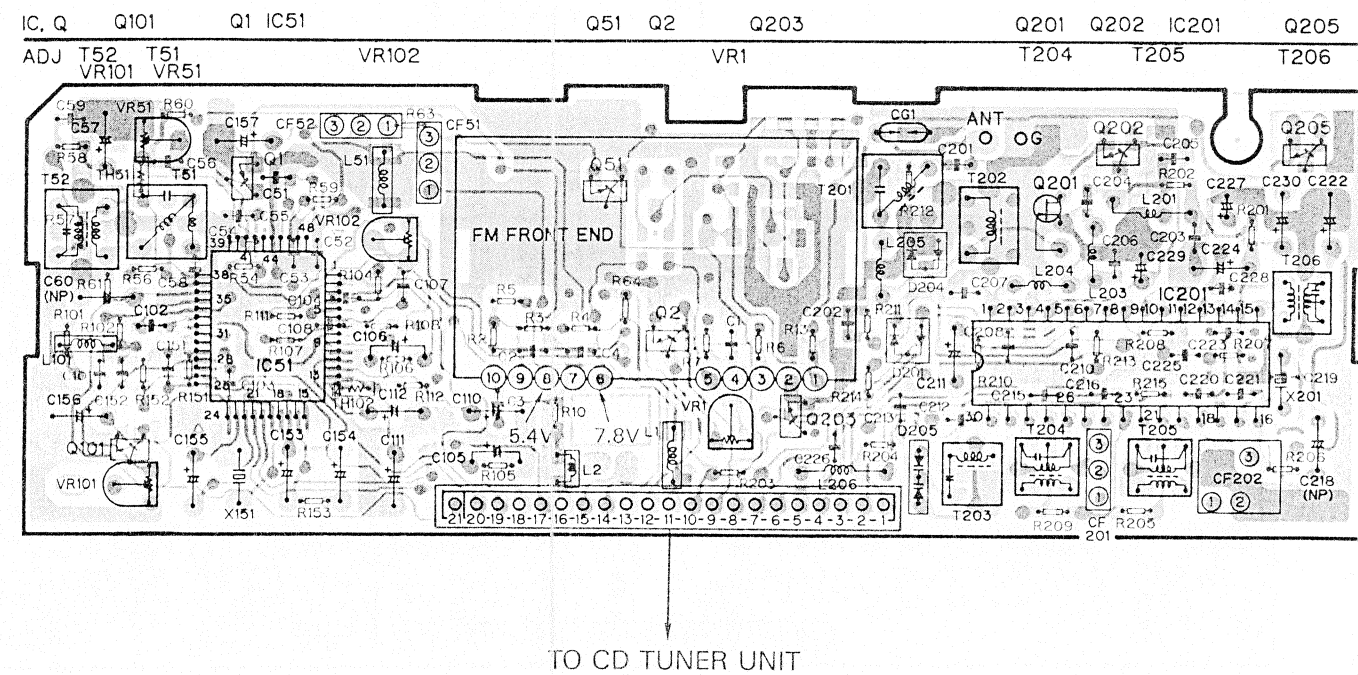


Fig. 79

• FM/AM Tuner Unit (DEH-700/EW, DEH-600/EW)

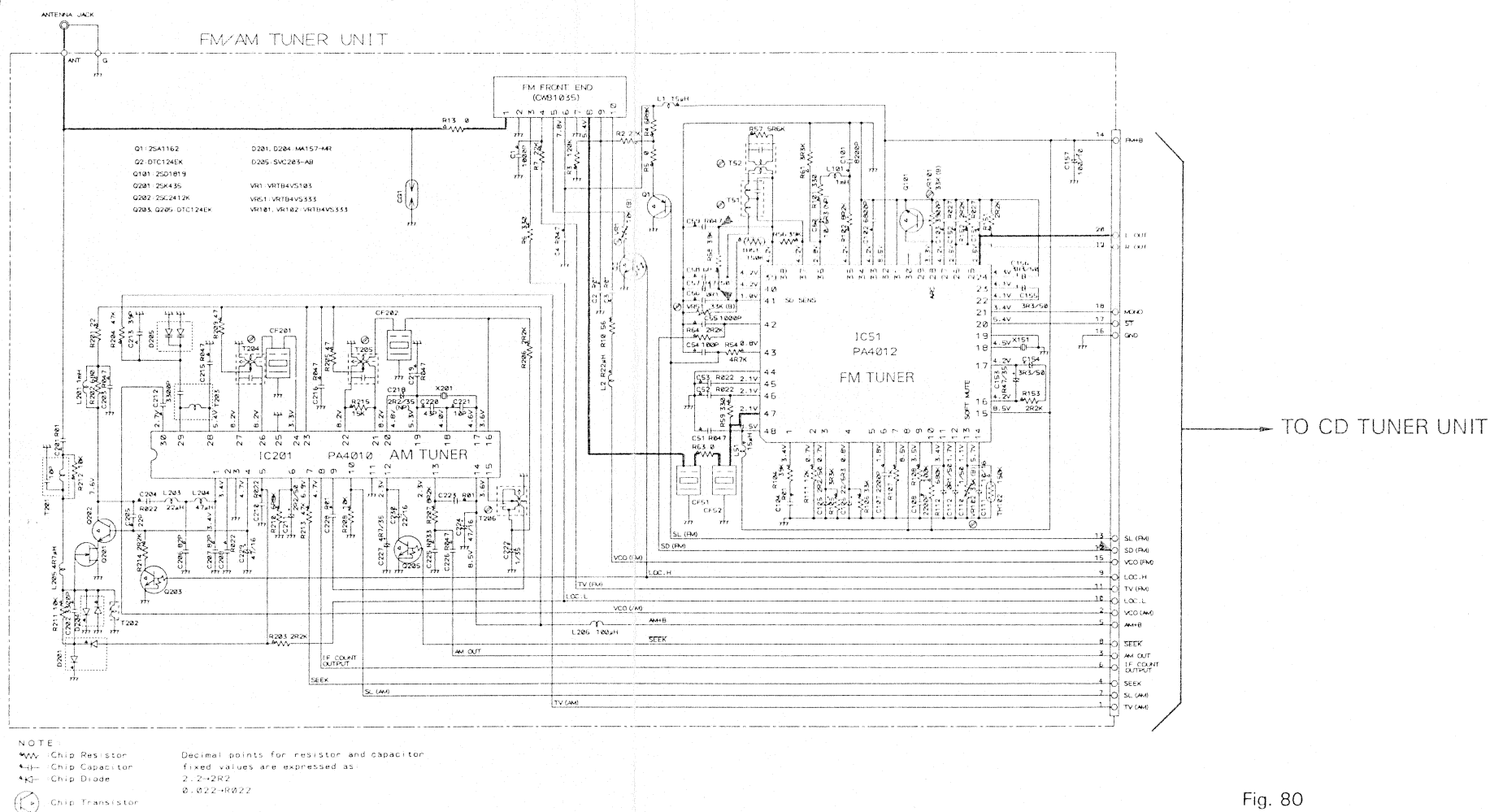


Fig. 80

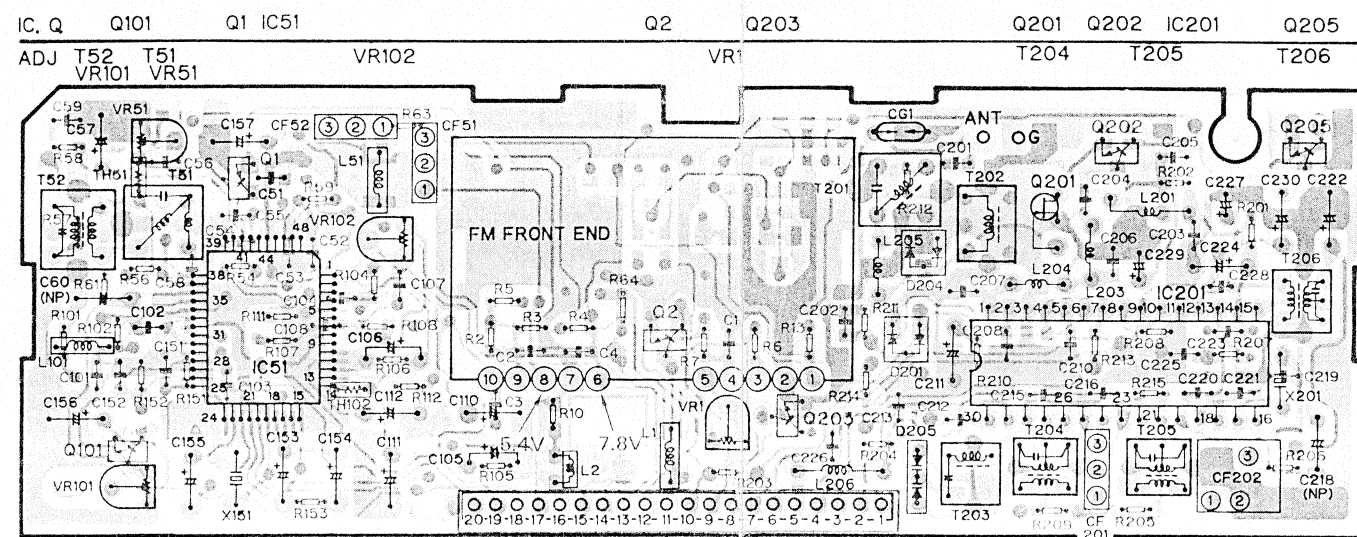


Fig. 81

• FM/AM Tuner Unit (DEH-700/EW, DEH-600/EW)

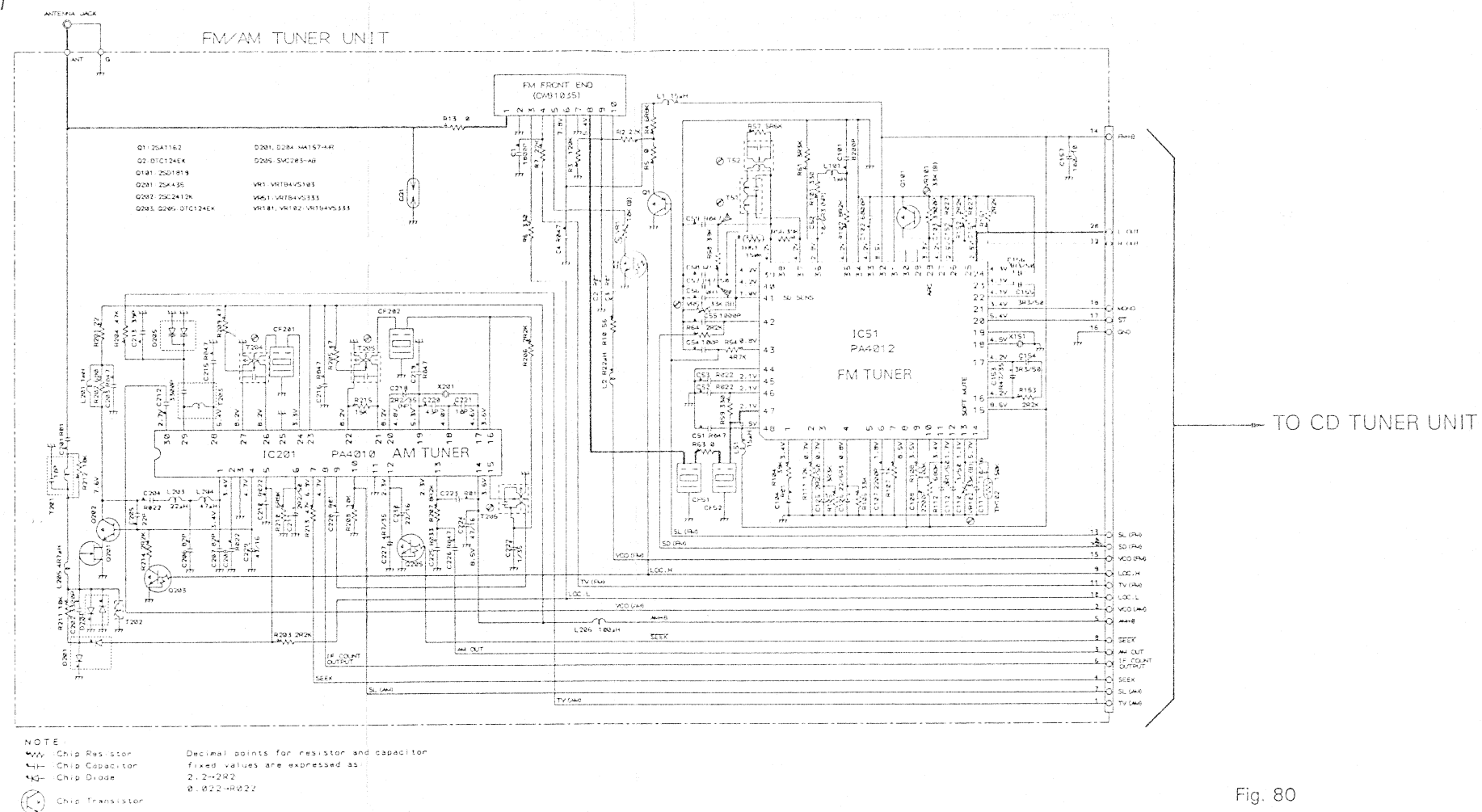


Fig. 80

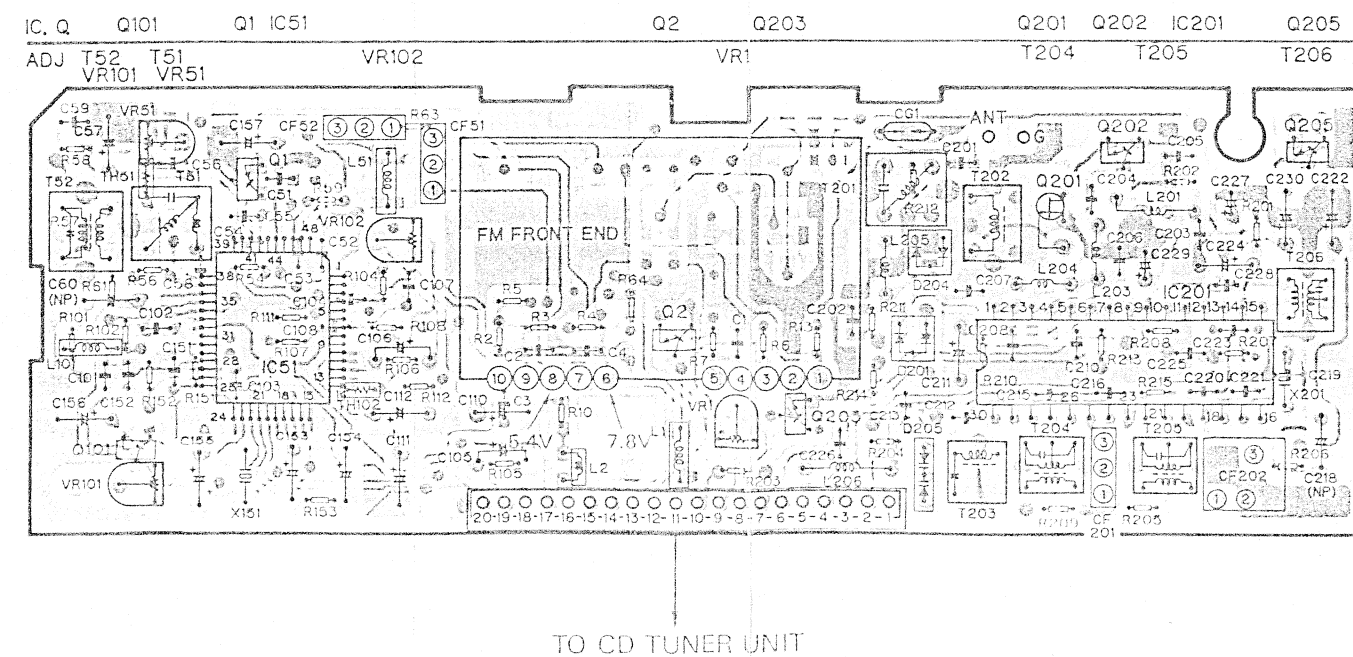


Fig. 81

25.CD MECHANISM UNIT EXPLODED VIEW

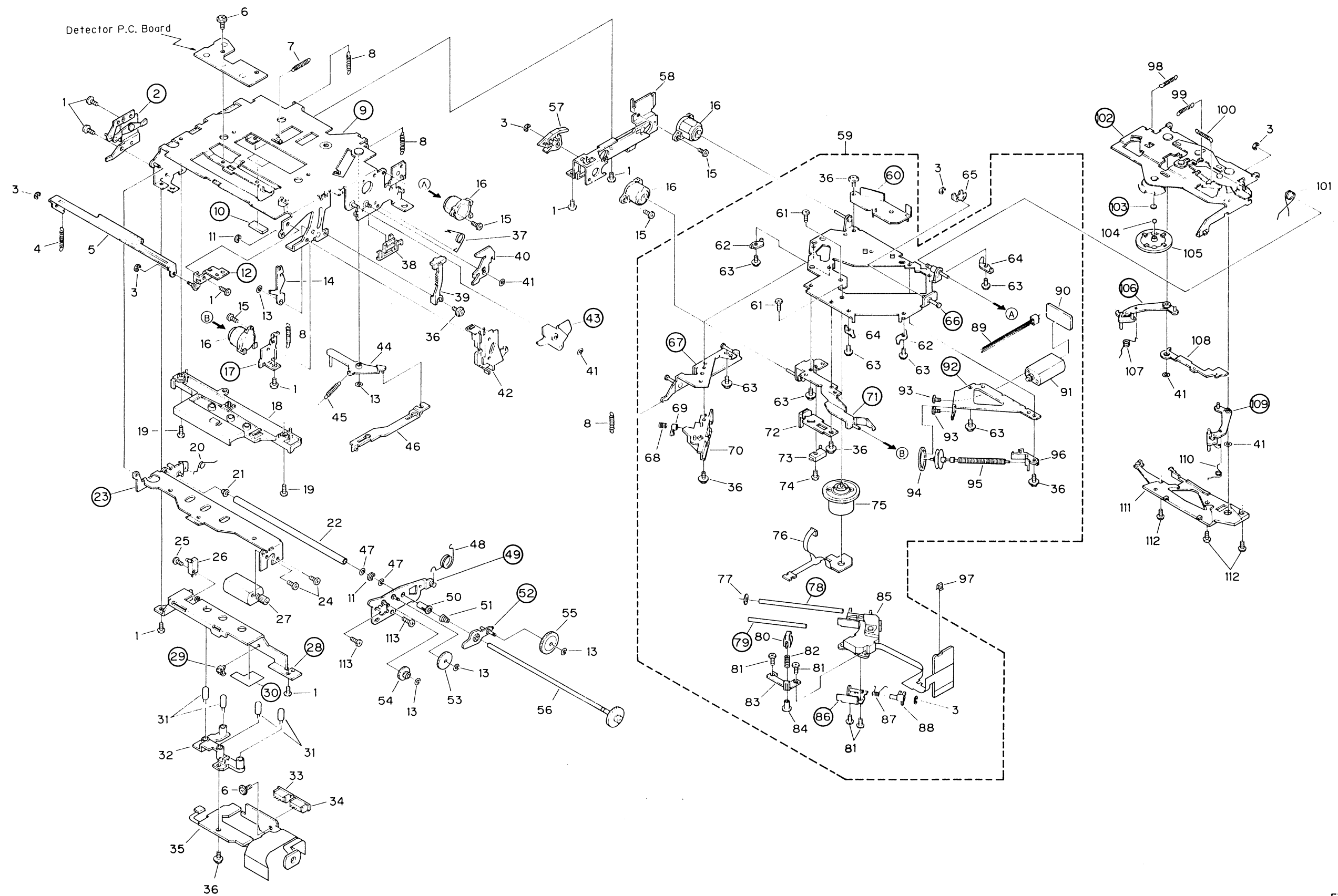
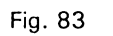


Fig. 82

• Parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.	Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BMZ26P030FMC	36	Screw	CBA1075	70	Holder	CNV2485	95	Screw Unit	CXA2375
2	Bracket Unit		37	Spring	CBH1336	71	Holder Unit		96	Holder	CNV1781
3	Washer	YE15FUC	38	Holder	CNV1633	72	Holder	CNV2229	97	Short Pin	CBL1010
4	Spring	CBH1137	39	Gear	CNV2302	73	Switch	CSN1018	98	Spring	CBH1292
5	Arm	CNC2858	40	Arm	CNV2451	74	Screw	CBA1070	99	Spring	CBH1297
6	Screw	CBA1076	41	Washer	CBF1022	75	Motor Unit	CXM1054	100	Spring	CBH1296
7	Spring	CBH1136	42	Cover	CNV2452	76	P.C. Board	CNP2383	101	Spring	CBH1294
8	Spring	CBH1182	43	Arm Unit		77	Cushion	CNV1863	102	Arm Unit	
9	Chassis Unit		44	Arm	CNV2506	78	Shaft		103	Spacer	
10	Cushion		45	Spring	CBH1343	79	Shaft		104	Ball	CNR1079
11	Washer	YE20FUC	46	Lever	CNV2505	80	Holder	CNV1512	105	Clamper	CNV2411
12	Bracket Unit		47	Washer	HBF-126	81	Screw	CBA1062	106	Arm Unit	
13	Washer	CBF-166	48	Spring	CBH1133	82	Spring	CBH1105	107	Spring	CBH1295
14	Cam	CNV2535	49	Bracket Unit		83	Holder	CNC1736	108	Arm	CNV2228
15	Screw	CBA1118	50	Bearing	CNV2224	84	Screw	CLA1319	109	Arm Unit	
16	Damper Unit	CXA3339	51	Spring	CBH1181	85	PU Unit	CGY1015	110	Spring	CBH1293
17	Bracket		52	Arm Unit		86	Holder Unit		111	Guide	CNV2223
18	Guide	CNV2221	53	Gear	CNV1628	87	Spring	CBH1106	112	Screw	CBA1084
19	Screw	CBA1131	54	Gear	CNV1627	88	Luck	CNV1513	113	Screw	BMZ20P030FMC
20	Spring	CBH1299	55	Gear	CNV1629	89	Connector	CDE2849			
21	Bearing	CNV1884	56	Gear Unit	CXA2990	90	P.C. Board	CNP2384			
22	Roller	CNV2225	57	Arm	CNV2510	91	Motor Unit	CXA3347			
23	Arm Unit		58	Bracket Unit		92	Bracket				
24	Screw	HBA-175	59	Carriage Mechanism Unit	CXA3474	93	Screw	CBA-098			
25	Screw	CBA1070				94	Belt	CNT1020			
26	Switch	CSN1020	60	Guide							
27	Motor Unit	CXA2129	61	Screw	HBA-163						
28	Bracket		62	Holder	CNC1738						
29	Holder		63	Screw	PMS20P030FMC						
30	Insulator		64	Holder	CNC1739						
31	LED	SLH-34VC3F	65	Arm Unit	CXA3441						
32	Holder	CNV2226	66	Chassis Unit							
33	Connector	CKS-719	67	Bracket Unit							
34	Connector	CKS-721	68	Spring	CBH1104						
35	P.C. Board	CNP2366	69	Spacer	CNV1844						

D D



• Parts List (DEH-700SDK/WG)

Mark No.	Description	Part No.	Mark No.	Description	Part No.
A	● 1 Display Unit	CWX1268	41 Plug	CKS-466	
	2 Lamp	CEL-147	42 IC	AN7188K	
	3 Bush	CNW-766	43 Holder		
	4 Lamp	CEL1013	44 Holder		
	5 Plug	CKS1663	● 45 Amp Unit	CWH1083	
	6 Holder	CNV2307	46 Connector		
	7 Lens	CNV2305	47—66		
	8 LCD	CAW1074	67 Holder		
	9 Case		68 Button	CAC2242	
	10 Holder	CNC1484	69 Spring	CBH1314	
B	11 Plate		70 Screw	BMZ20P040FZK	
	12 Screw	BMZ20P050FZK	71 Grille Unit	CXA3294	
	13 Grille	CNS1849	72 P.C. Board	CNP2253	
	14 Holder		73 Screw	BPZ20P040FMC	
	15 Lens	CNV2304	74 Button	CAC2238	
	16 Cushion		75 Socket	CKS1664	
	17 Button	CAC2243	● 76 Detach Unit	CXA3446	
	18 Button	CAC2241	77 Shaft		
	19 Button	CAC2350	78 Washer	YE12FUC	
	20 Button	CAC2351	79 Arm	CNV2483	
C	21 Stopper		80 Holder	CNV2306	
	22 Grille Unit	CXA3435	81 Washer	YF15FUC	
	23 Shaft		82 Spring	CBH1364	
	24 Cushion		83 Shaft		
	25 Cushion		84 Holder Unit		
	26 Button	CAC2240	85 Spring	CBH1315	
	27 Button	CAC2239	86 Washer	WT22D050D025	
	28 Button	CAC2344	87 Holder Unit		
	29 Button	CAC2345	88 Spring	CBH1328	
	30 Button	CAC2346	89 Arm		
D	31 Button	CAC2347	90 Shaft		
	32 Button	CAC2348	91 Holder Unit		
	33 Button	CAC2349	92 Screw	BMZ20P040FMC	
	34 Handle	CNC1631	93 Switch	CSN1012	
	35 Panel	CNS1911	94 Screw	BMZ20P060FMC	
	36 Spring	CBH-865	95 Cord	CDE2626	
	37 Screw	BMZ30P140FMC	96—105		
	38 Screw	BMZ30P050FMC	106 Case		
	39 Heat Sink		107 Holder		
	40 Holder		108 FM Front End	CWB1035	

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Mark No.	Description	Part No.	Mark No.	Description	Part No.
109	Insulator		139	Case	
110	Plug (21P)		140	Insulator	
111	Insulator		141	Screw	PMF26P060FMC
112	Case		● 142	CD Mechanism Unit	CXK2400
113	Antenna Jack	CKX1010	143	Cap	CNV1455
● 114	FM/AM Tuner Unit	CWE1187	144	Cord	CDE2643
115	Holder		145	.....
116	Plug		146	Antenna Cable	CDH1104
117	Holder		147	Screw	BMZ30P040FMC
118	Plug		148	Bush	CNV1917
119	.....		149	Screw	CBA1002
120	Plug		150	Holder	
121	Connector	CKS1535	151	Plate	
122	Connector	CKS1572	152	Cord	CDE2642
123	Connector	CKS1565	153	Resistor	RS1/2PS102JL
124	Screw	HBA-165	154	Cap	CNS1472
125	IC	AN8377N	155	.....
126	Plate		156	.....
127	Screw	BMZ26P040FMC	157	.....
128	Insulator		158	Holder	
129	Screw	PMS26P040FMC	159	Screw	BMZ26P140FMC
130	Holder		160	Washer	WT17D040D025
131	Screw	CMZ26P040FMC	161	Screw	PMZ20P020FZK
132	Holder		162	Spacer	
133	Chassis Unit		163	.....
134	Plate		164	Cushion	
135	Holder				
● 136	CD Tuner Unit	CWX1299			
137	Screw	CBA1094			
138	Caution Card	CRP1031			

● Parts List (DEH-700/EW, DEH-750/UC, DEH-750/ES, DEH-80/US)

NSP: Non Spare Part

			DEH-700SDK /WG	DEH-700/EW	DEH-750/UC	DEH-750/ES	DEH-80/US
Mark	No.	Description	Part No.	Part No.	Part No.	Part No.	Part No.
●	1	Display Unit	CWX1268	CWX1268	CWX1265	CWX1265	CWX1265
	4	Lamp	CEL1013	CEL1013	CEL1025	CEL1025	CEL1025
	22	Grille Unit	CXA3435	CXA3433	CXA3431	CXA3434	CXA3432
●	45	Amp Unit	CWH1083	CWH1083	CWH1082	CWH1082	CWH1090
	106	Case	NSP	.....	.....	.....	.....
●	111	Insulator	NSP	.....	.....	.....	.....
	112	Case	NSP	.....	.....	.....	.....
	114	FM/AM Tuner Unit	CWE1187	CWE1167	CWE1169	CWE1168	CWE1169
	119	Plug	.....	.....	.....	.....	NSP
	130	Holder	NSP (A)	NSP (A)	NSP (B)	NSP (B)	NSP (C)
●	133	Chassis Unit	NSP (A)	NSP (B)	NSP (B)	NSP (B)	NSP (B)
	136	CD Tuner Unit	CWX1299	CWX1298	CWX1296	CWX1300	CWX1297
	143	Cap	CNV1455	CNV1455	.....	.....	.....
	144	Cord	CDE2643	CDE2643	.....	.....	.....
	152	Cord	CDE2642	CDE2642	CDE2641	CDE2641	CDE2625
	155	Cord	.....	.....	CDE2639	CDE2639	CDE2733
	156	Cord	.....	.....	.....	.....	CDE2640
	157	Cap	.....	.....	CNW-829 (× 2)	CNW-829 (× 2)	CNW-829 (× 4)

• Parts List (DEH-650/UC)

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1—9	.....		99	Lamp	CEL1025
10	Holder	CNC1484	100	Holder	CNV2307
11—33	.....		101	Lens	CNV2305
34	Handle	CNC1631	102	LCD	CAW1074
35	Panel	CNS1911	103	Case	
36	Spring	CBH-865	104	P.C. Board	CNP2255
37	Screw	BMZ30P140FMC	① 105	Display Unit	CWX1275
38	Screw	BMZ30P050FMC	106	.....
39	Heat Sink		107	Holder	
40	Holder		108	FM Front End	CWB1035
41	Plug	CKS-466	109	Insulator	
42	IC	AN7188K	110	Plug (20P)	
43	Holder		111	.....
44	Holder		112	.....
① 45	Amp Unit	CWH1082	113	Antenna Jack	CKX1010
46	Connector		① 114	FM/AM Tuner Unit	CWE1169
47	Shaft		115	Holder	
48	Button	CAC2243	116	Plug	
49	Button	CAC2241	117	Holder	
50	Button	CAC2350	118	Plug	
51	Button	CAC2351	119	.....
52	Stopper		120	.....
53	Button	CAC2245	121	Connector	CKS1535
54	Grille Unit	CXA3296	122	Connector	CKS1572
55	Cushion		123	Connector	CKS1565
56	Lens	CNV2304	124	Screw	HBA-165
57	Cushion		125	IC	AN8377N
58	Cushion		126	Plate	
59	Button	CAC2240	127	Screw	BMZ26P040FMC
60	Button	CAC2239	128	Insulator	
61	Button	CAC2344	129	Screw	PMS26P040FMC
62	Button	CAC2345	130	Holder	
63	Button	CAC2346	131	Screw	CMZ26P040FMC
64	Button	CAC2347	132	Holder	
65	Button	CAC2348	133	Chassis Unit	
66	Button	CAC2349	134	.....
67—95	.....		135	Holder	
96	Screw	BLZ20P050FMC	① 136	CD Tuner Unit	CWX1302
97	Bush	CNW-766	137	Screw	CBA1094
98	Lamp	CEL-147	138	Caution Card	CRP1031

Mark No.	Description	Part No.	Mark No.	Description	Part No.
139	Case		154	Cap	CNS1472
140	Insulator		155	Cord	CDE2639
141	Screw	PMF26P060FMC	156	.....
● 142	CD Mechanism Unit	CXK2400	157	Cap (× 2)	CNW-829
143—145	.....		158	.....
146	Antenna Cable	CDH1104	159	Screw	BMZ26P140FMC
147	Screw	BMZ30P040FMC	160—162	.....
148	Bush	CNV1917	163	Spaer	
149	Screw	CBA1002	164	Cushion	
150	Holder				
151	Plate				
152	Cord	CDE2641			
153	Resistor	RS1/2PS102JL			

● Parts List (DEH-620/US, DEH-600/EW)

NSP: Non Spare Part

			DEH-650/UC	DEH-620/US	DEH-600/EW
Mark	No.	Description	Part No.	Part No.	Part No.
●	45	Amp Unit	CWH1082	CWH1082	CWH1083
	54	Grille Unit	CXA3296	CXA3297	CXA3609
	97	Bush	CNW-766 (× 5)	CNW-766 (× 2)	CNW-766 (× 5)
	98	Lamp	CEL-147	.....	CEL-147
	99	Lamp	CEL1025	CEL1025	CEL1013
●	105	Display Unit	CWX1275	CWX1277	CWX1310
●	114	FM/AM Tuner Unit	CWE1169	CWE1186	CWE1167
	130	Holder	NSP	NSP	NSP
●	136	CD Tuner Unit	CWX1302	CWX1303	CWX1309
	143	Cap	.....	.....	CNV1455
	144	Cord	.....	.....	CDE2643
	152	Cord	CDE2641	CDE2641	CDE2642
	155	Cord	CDE2639	CDE2639	.....
	157	Cap (× 2)	CNW-829	CNW-829	.....

27. PACKING METHOD

• Parts List

NSP: Non Spare Part

		DEH-700 SDK/WG	DEH-700 /EW	DEH-750 /UC	DEH-750 /ES	DEH-80 /US	DEH-650 /UC	DEH-620 /US	DEH-600 /EW
Mark	No.	Description	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
	1	Carton	CHG1784	CHG1783	CHG1786	CHG1785	CHG1787	CHG1788	CHG1789
*	2-1	Owner's Manual	CRD1359	CRD1358 CRD1365	CRD1361	CRD1360	CRB1159	CRD1364	CRD1363
	2-2	Caution Card	NSP	.....	.....	.....	.....	.....	.....
	2-3	Caution Card	NSP	NSP	NSP	NSP	NSP	NSP	NSP
	2-4	Caution Card	NSP	NSP	NSP	NSP	NSP	.....	NSP
	2-5	Caution Card	.....	.....	.....	.....	NSP	.....	.....
	2-6	Card	NSP	NSP	.....	.....	.....	.....	NSP
	2-7	Passport	NSP	.....	.....	.....	.....	.....	.....
	2-8	Seal	NSP	NSP	NSP	NSP	NSP	NSP	NSP
	2-9	Card	.....	.....	NSP	.....	NSP	NSP	.....
	3	Styrofoam(R)	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332	CHP1332
	4	Cover	CEG1064	CEG1064	CEG1064	CEG1064	CEG1064	CEG1064	CEG1064
*	5	Accessory Assy	CEA1381	CFA1381	CFA1381	CFA1381	CFA1381	CFA1381	CFA1381
	6	Cord	CDI2642	CDI2642	CDI2641	CDI2641	CDI2641	CDI2641	CDI2641
	7	Panel	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911	CNS1911
	8-1	Case for Detach Grille	NSP	NSP	NSP	NSP	NSP	.....	.....
	8-2	Cover	CEG1072	CEG1072	CEG1072	CEG1072	CEG1072	.....	.....
	9	Contain Box	.....	.....	CHI1786	.....	CHI1787	CHI1788	CHI1789
	10	Styrofoam(L)	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331	CHP1331

* 5 Accessory Assy CEA1381					
Mark No.	Description	Part No.	Mark No.	Description	Part No.
5-1	Screw Assy		5-2	Strap	CNF-111
5-1-1	Screw(× 4)	BMZ40P080FMC	5-3	Bush	CNV1917
5-1-2	Screw(× 4)	BMZ50P080FMC	5-4	Spring(× 2)	CBH-865
5-1-3	Screw(× 1)	CBA-102	5-5	Handle(× 2)	CNC1631
5-1-4	Screw(× 1)	CBA1002			
5-1-5	Nut(× 2)	NF50FMC			

* 2-1 Owner's Manual

Part No.	Model	Language
CRD1359	DEH-700SDK/WG	German, French
CRD1358	DEH-700/EW	English, French, German, Spanish
CRD1365	DEH-700/EW	Swedish, Norwegian, Dutch, Finnish
CRD1361	DEH-750/UC	English, French
CRD1360	DEH-750/ES	English, French, Spanish, Arabic
CRB1159	DEH-80/US	English
CRD1364	DEH-650/UC	English, French
CRD1363	DEH-620/US	English, Spanish
CRD1388	DEH-600/EW	English, French, German, Dutch

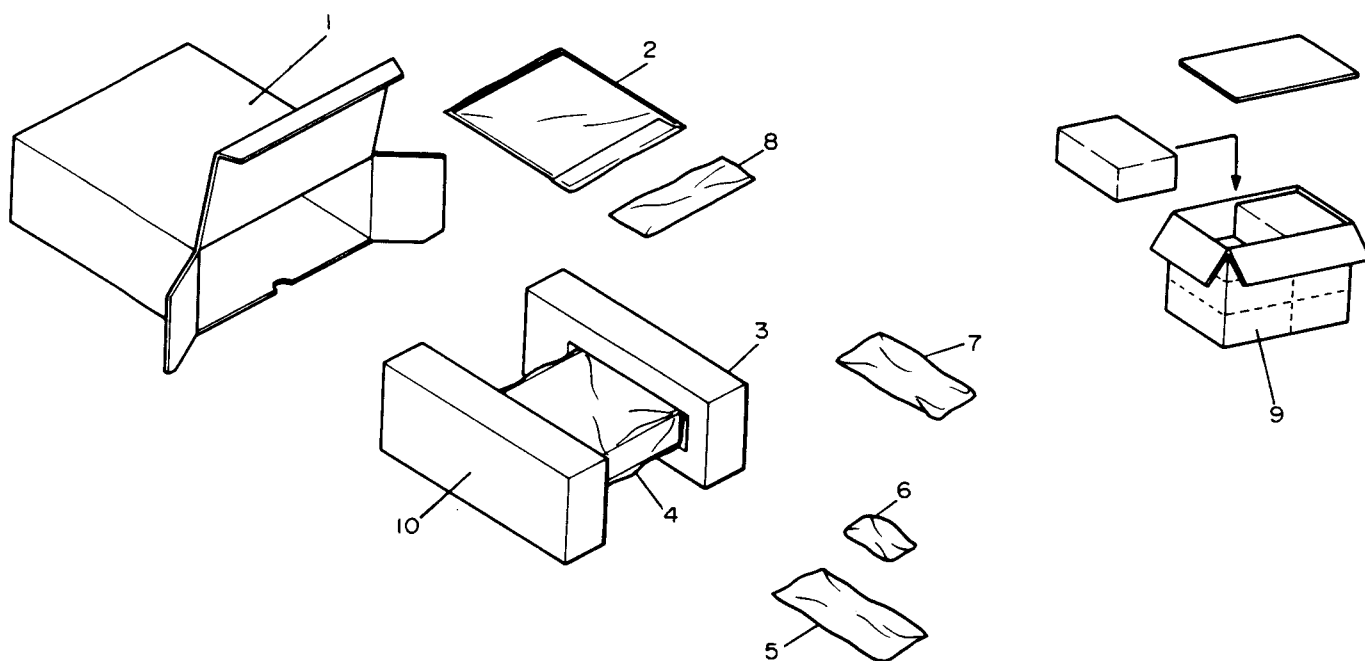


Fig. 84

28.ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/BS□□□J, RS1/10S□□□J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Unit Number :

Unit Name : CD Tuner Unit (DEH-750/UC)

MISCELLANEOUS

Mark	-----	Circuit Symbol & No.	-----	Part Name	Part No.
IC 351				CXA1081Q	
IC 451 655 657 662 706				M5218FP	
IC 452				CWW1213	
IC 501				LC7218M	
IC 601				CXA1082BQ	
IC 651				AN8377H	
IC 668 669				LA6501-FA	
IC 701				CXD1167Q	
IC 703				SM5807ES-M	
IC 704				LC7881MBM	
IC 705				UPC358G2	
IC 751				PD4231	
IC 752				M51955AFP	
IC 753				M54546AL	
IC 852				M5228FP	
IC 961				PA2018	
Q 351				2SB1243	
Q 352 451 505 601 705 758 759	Chip Transistor			UN2211	
Q 453 454 851 852 853 854	Chip Transistor			DTC323TK	
Q 502	Chip Transistor			2SC3098	
Q 503 504 510 513	Chip Transistor			2SC2712	
Q 509	Chip Transistor			2SC3295	
Q 602 603	Chip Transistor			2SD1048	
Q 651				2SD1760F5	
Q 652 706 752 754 770	Chip Transistor			UN2111	
Q 653 753	Chip Transistor			2SD601A	
Q 703 704	Chip Transistor			UN2215	
Q 751				2SD1859	
Q 755 756 757 761 762				2SB1238	
Q 760 763 764 765 766 767 968	Chip Transistor			UN2211	
Q 855 967	Chip Transistor			UN2111	
Q 856	Chip Transistor			2SB709	
Q 965				2SD1684	
D 451 452 501 502 504 961	Chip Diode			MA151WK-MT	
D 453 454	Chip Diode			MA3047H	
D 456 701 851 852 853	Chip Diode			MA151WA-MN	
D 503 751 752 753 757 758 759 760 762	Chip Diode			MA153-MC	
D 652				RD11JSB1	
D 653 754 964 965				ERA15-02VH	
D 661 662				HZS2ALL	
D 755				RD6R8JSB1	
D 854	Chip Diode			MA3082H	
D 963				RD5R6JSB1	
L 501 701 752	Ferri-Inductor			CTF1082	
L 751 961	Ferri-Inductor			LAU150X	
L 962	Inductor			CTF1081	

Mark	-----	Circuit Symbol & No.	-----	Part Name	Part No.
BP 401				Buzzer	CPV1010
G 900				Surge Absorber	ERZ-C07DK220
VR 351				Semi-fixed	CCP1005
VR 352				Semi-fixed	CCP1006
VR 604				Semi-fixed 2.2kΩ (B)	CCP1015
VR 651				Semi-fixed 47kΩ (B)	CCP1023
X 501				Crystal Resonator	CSS1030
X 701				Crystal Resonator	CSS1052
X 751				Crystal Resonator	CSS1023
TH 351				Thermistor	CCX1006
TH 751				Thermistor	CCX1007
				FM/AM Tuner Unit	

RESISTORS

Mark	-----	Circuit Symbol & No.	-----	Part Name	Part No.
R 334 522 541 622 670 691				RS1/10S103J	
R 341				RD1/4PS221JL	
R 344 367 511 515 636 643				RS1/10S473J	
R 345				RS1/10S513J	
R 351 352				RD1/4PS110JL	
R 353 381 658 659 717 718 723 724 776				RS1/10S102J	
R 354 378 548				RS1/10S153J	
R 355 610				RS1/10S113J	
R 356 357 358 359 517 669				RS1/10S563J	
R 360 361 383 608				RS1/10S823J	
R 362				RS1/10S564J	
R 363 869 870 895 896 962				RS1/10S223J	
R 364 365 618 671				RS1/10S105J	
R 366 377 665 738 740 748				RS1/10S562J	
R 379 620				RS1/10S332J	
R 380 617 625				RS1/10S203J	
R 382 667				RS1/10S363J	
R 384 451 452 630				RS1/10S273J	
R 453				RS1/10S183J	
R 454 530 532 536 702 706 773 774				RS1/10S0R0J	
R 455 456				RS1/10S472J	
R 457 458				RS1/10S473J	
R 459 460				RS1/10S332J	
R 461 462				RS1/10S163J	
R 463 464 469 501 502 503 504 509				RS1/10S222J	
R 470 471 516 609 614 619 627 725 726 764				RS1/10S104J	
R 505 506 507 512 518 525 533 534 542				RS1/10S472J	
R 508 523 634 796				RS1/10S474J	
R 510				RS1/10S221J	
R 521 645 881 882				RS1/10S392J	
R 524				RS1/10S122J	
R 531 765 767 769 771 780 781 782 783				RS1/10S222J	
R 543				RS1/10S470J	
R 544 546 601 602				RS1/10S101J	
R 545				RS1/10S182J	

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R	547	779			RS1/10S821J
R	606	623			RS1/10S224J
R	607	760			RS1/10S683J
R	611				RS1/10S432J
R	612				RS1/10S623J
R	613				RS1/10S624J
R	616	651 653			RS1/10S163J
R	621				RS1/10S184J
R	624	652 666 865 866			RS1/10S393J
R	628	668			RS1/10S183J
R	635	694 721 722			RS1/10S822J
R	637	657 660 690			RS1/10S272J
R	644				RS1/10S362J
R	654				RS1/10S150J
R	672				RS1/10S364J
R	673	697 729 730 732 733 734 735 736 753			RS1/10S473J
R	674				RS1/10S133J
R	676	677			RS1/10S201J
R	692	695 703 709 737 739 741 745 746 747			RS1/10S103J
R	693	696			RS1/10S5R6J
R	704	727 728 784 863 864 883 884			RS1/10S472J
R	711	712 719 720			RS1/10S511J
R	713	714			RS1/10S181J
R	715	716			RS1/10S244J
R	742	743 744 754 756 758			RS1/BS182J
R	749	762 763 786 792 794 886			RS1/10S103J
R	750				RS1/10S562J
R	751	752			RS1/10S151J
R	755	757 759 795 797 798 799			RD1/4PS103JL
R	761	788 791 793 872			RS1/10S473J
R	766	768 770 785 871			RS1/10S104J
R	778				RS1/10S752J
R	787	789 790			RS1/10S222J
R	859	860 887 892 894			RS1/10S0R0J
R	867	868 964			RS1/10S102J
R	873	874 897 898	Chip Resistor 4.7k Ω		CCM1023
R	875	876 879 880	Chip Resistor 12k Ω		CCM1026
R	885				RS1/10S682J
R	961				RS1/10S220J
R	1001	1002 1003			RD1/4PS103JL

CAPACITORS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	351	707 708 874 973			CEA101M6R3LS
C	352	355 505 520 521 522 523 525 526			CKSQYB103K50
C	353	654 657			CKSQYB333K25
C	354				CASA100M6R3
C	356				CKSQYB332K50
C	357	360 361 614 630 651 653 663 758			CKSYB224K25
C	358	503 510 511 528 607 665 675 677 757			CKSQYB473K25
C	370	373 627 877 878 879 880			CCSQCH220J50
C	371	509 615 858			CKSQYB102K50
C	372				CCSQCH150J50
C	451	452			CEA220M6R3LS
C	453	454			CEALNP4R7M35
C	455	456			CEA4R7M50LS
C	457	458 865 868 869 870 871 872			CCSCH330J50
C	459	460 863 864 967 968 969 976			CEA101M10LS
C	461	462 659 689 759 855 856			CEA100M25LS
C	501	502			CCSQCH270J50

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	504				CCSQSL561J50
C	506	621			CEALNP4R7M16
C	517	518 605 612 620 656 701 702 705 764			CKSYB104K25
C	519	628 760			CKSQYB104K25
C	527	529			CCSQSL101J50
C	534	611 625 626 652 662 676 678 709 710			CKSQYB103K50
C	535				CCCSL330J50
C	601	623 724			CKSQYB222K50
C	606	616 711 712			CEA220M10LS
C	608				CEALNP220M16
C	609	715			CKSQYB472K50
C	610				CCSQCH221J50
C	613				CKSQYB223K25
C	617				CEA4R7M35LS
C	618				CKSQYB272K50
C	629	713 714			CKSQYB683K25
C	655				CCSQSL681J50
C	661	666	220 μ F/10V		CCH1015
C	703	704			CCSQCH090D50
C	716				CKSQYB472K25
C	717	718 753 972			CCSQCH471J50
C	719	720			CKSQYB682K50
C	721				CEA330M10LS
C	751				CKSQYB103K50
C	752				CEA6R8M35LS
C	754		Trimmer		CCL1017
C	755				CCSQCH040C50
C	761	763 974 977 979			CKSQYB473K25
C	762				CKSQYB102K25
C	853	854			CEA100M25LS
C	961		1000 μ F/16V		CCH1003
C	962				CEA010M50LS2
C	963				CEA0R1M50LS2
C	964	965 966			CEA470M16LS
C	970				CEA100M10LS2
C	971				CKSYB104K25
C	978				CEA100M16LS2
C	980				CEA330M16LS

CD Tuner Unit	DEH-750/UC	DEH-750/ES	DEH-80/US	DEH-650/UC	DEH-620/US
Symbol & No.	Part No.	Part No.	Part No.	Part No.	Part No.
IC851	-----	-----	M5218FP	-----	-----
Q451	UN2211	UN2211	UN2211	DTC114EU	UN2211
Q761, 762	2SB1238	2SB1238	2SB1238	2SB1238	-----
Q763, 764	UN2211	UN2211	UN2211	UN2211	-----
Q765, 767	UN2211	UN2211	UN2211	UN2211	-----
D457	-----	-----	-----	MA151A-MA	-----
D751, 752, 753	MA153-MC	MA153-MC	MA153-MC	-----	-----
D757, 758, 759	MA153-MC	MA153-MC	MA153-MC	-----	-----
D760	MA153-MC	MA153-MC	MA153-MC	-----	-----
SW401	-----	-----	CSH-073	-----	-----
R454	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J	-----	RS1/10S0R0J
R465	-----	-----	-----	RD1/4PS103JL	-----
R747, 749	RS1/10S103J	RS1/10S103J	RS1/10S103J	RS1/10S103J	-----
R748, 750	RS1/10S562J	RS1/10S562J	RS1/10S562J	RS1/10S562J	-----
R772	-----	RS1/10S302J	-----	-----	-----
R773	RS1/10S0R0J	RS1/10S511J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J
R774	RS1/10S0R0J	RS1/10S0R0J	RS1/10S0R0J	RS1/10S302J	RS1/10S0R0J
R775	-----	-----	-----	RS1/10S752J	-----
R851, 852	-----	-----	RS1/10S472J	-----	-----
R853, 854	-----	-----	RS1/10S682J	-----	-----
R855, 856	-----	-----	RS1/10S152J	-----	-----
R857, 858	-----	-----	RS1/10S672J	-----	-----
R875, 876	CCN1026 (12k Ω)	CCN1026 (12k Ω)	CCN1025 (10k Ω)	CCN1026 (12k Ω)	CCN1026 (12k Ω)
R877, 878	-----	-----	CCN1023 4.7k Ω	-----	-----
R879, 880	CCN1026 (12k Ω)	CCN1026 (12k Ω)	CCN1025 (10k Ω)	CCN1026 (12k Ω)	CCN1026 (12k Ω)
R881, 882	RS1/10S392J	RS1/10S392J	RS1/10S472J	RS1/10S392J	RS1/10S392J
R889	-----	-----	RS1/10S0R0J	-----	-----
R892	RS1/10S0R0J	RS1/10S0R0J	RS1/10S103J	RS1/10S0R0J	RS1/10S0R0J
R897, 898	CCN1023 4.7k Ω	CCN1023 4.7k Ω	-----	CCN1023 4.7k Ω	CCN1023 4.7k Ω
C859, 860	-----	-----	CEA100M25LS	-----	-----
C861, 862	-----	-----	CCSCH330J50	-----	-----
C875, 876	-----	-----	CCSOYB102K25	-----	-----

Unit Number :

Unit Name : CD Tuner Unit (DEH-700SDK/WG)

MISCELLANEOUS

Mark ===== Circuit Symbol & No. ===== Part Name Part No.

IC 351	CXA10810
IC 451 555 657 662 706	M5218FP
IC 452	CWW1213
IC 501	LC7218M
IC 502	KHA172
IC 601	CXA10828Q
IC 651	AN8377N
IC 668 669	LA6501-FA
IC 701	CKD1167Q
IC 703	SM5807ES-M
IC 704	LC7881MBM
IC 705	UPC358G2
IC 751	PD4231
IC 752	M51955AFP
IC 753	M54546AL
IC 852	M5228FP
IC 961	PA2018
Q 351	2SB1243
Q 352 451 505 601 705 758 759	Chip Transistor UN2211
Q 453 454 851 852 853 854	Chip Transistor DTC323TK
Q 455 856	Chip Transistor 2SB709
Q 502	Chip Transistor 2SC3098
Q 503 504 510 513 514	Chip Transistor 2SC2712
Q 508	Chip Transistor UN2212
Q 509	Chip Transistor 2SC3295
Q 703 704	Chip Transistor UN2215
Q 602 603	Chip Transistor 2SD1048

Mark ===== Circuit Symbol & No. ===== Part Name Part No.

Q 651	2SD1760F5
Q 652 706 752 754 770	Chip Transistor UN2111
Q 653 753	Chip Transistor 2SD601A
Q 751	2SD1859
Q 755 756 757 761 762	2SB1238
Q 760 763 764 765 766 767 968	Chip Transistor UN2211
Q 855 967	Chip Transistor UN2111
Q 965	2SD1684
D 451 452 501 502 504 961	Chip Diode MA151WK-MT
D 453 454	Chip Diode MA3047H
D 455 456 701 851 852 853	Chip Diode MA151WA-MN
D 503 751 752 753 757 758 759 760 762	Chip Diode MA153-MC
D 652	RD11JSB1
D 653 754 964 965	ERA15-02VH
D 661 662	HZS2ALL
D 755	RD6R8JSB1
D 854	MA3082H
D 963	RD5R6JSB1
L 501 701 752	Ferri-Inductor CTF1082
L 751 961	Ferri-Inductor LAU150K
L 962	Inductor CTF1081
BP 401	Buzzer CPV1010
G 900	Surge Absorber ER2-C07DK220
VR 351	Semi-fixed CCP1005
VR 352	Semi-fixed CCP1006
VR 604	Semi-fixed 2.2k Ω (B) CCP1015
VR 651	Semi-fixed 47k Ω (B) CCP1023
X 501	Crystal Resonator CSS1030
X 502	Crystal Resonator CSS1061
X 701	Crystal Resonator CSS1052
X 751	Crystal Resonator CSS1023
TH 351	Thermistor CCX1006
TH 751	Thermistor CCX1007

FM/AM Tuner Unit

RESISTORS

Mark ===== Circuit Symbol & No. ===== Part Name Part No.

R 334 472 473 522 541 622 670 691	RS1/10S103J
R 341	RD1/4PS221JL
R 344 367 511 514 515 636 643	RS1/10S473J
R 345	RS1/10S513J
R 351 352	RD1/4PS110JL
R 353 381 658 659 717 718 723 724 776	RS1/10S102J
R 354 378 548	RS1/10S153J
R 355 610	RS1/10S113J
R 356 357 358 359 517 669	RS1/10S563J
R 360 361 383 608	RS1/10S823J
R 362	RS1/10S564J
R 363 895 896 962	RS1/10S223J
R 364 365 618 671	RS1/10S105J
R 366 377 665 738 740 748	RS1/10S562J
R 379 620	RS1/10S332J
R 380 617 625	RS1/10S203J
R 382 667	RS1/10S363J
R 384 451 452 630	RS1/10S273J
R 453	RS1/10S183J
R 454 530 532 536 537 702 706	RS1/10S0R0J
R 455 456	RS1/10S472J
R 457 458	RS1/10S473J
R 459 460	RS1/10S332J
R 461 462	RS1/10S163J
R 463 464 469 501 502 503 504 509 520 528	RS1/10S222J

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R	470	471 516 609 614 619 627 725 726 764			RS1/10S104J
R	505	506 507 512 518 525 533 534 542			RS1/10S472J
R	508	523 634 796			RS1/10S474J
R	510				RS1/10S221J
R	519	545			RS1/10S182J
R	524				RS1/10S122J
R	526				RS1/10S684J
R	531	765 767 769 771 773 780 781 782 783			RS1/10S222J
R	543				RS1/10S470J
R	544	546 601 602			RS1/10S101J
R	547	779			RS1/10S821J
R	606	623			RS1/10S224J
R	607	760			RS1/10S683J
R	611				RS1/10S432J
R	612				RS1/10S623J
R	613				RS1/10S624J
R	616	651 653			RS1/10S163J
R	621				RS1/10S184J
R	624	652 666			RS1/10S393J
R	628	668 775			RS1/10S183J
R	635	694 721 722			RS1/10S822J
R	637	657 660 690			RS1/10S272J
R	644				RS1/10S362J
R	645	881 882			RS1/10S392J
R	654				RS1/10S150J
R	672				RS1/10S364J
R	673	697 729 730 732 733 734 735 736 753			RS1/10S473J
R	674				RS1/10S133J
R	676	677			RS1/10S201J
R	692	695 703 709 737 739 741 745 746 747			RS1/10S103J
R	693	696			RS1/10S5R6J
R	704	727 728 784 883 884			RS1/10S472J
R	711	712 719 720			RS1/10S511J
R	713	714			RS1/10S181J
R	715	716			RS1/10S244J
R	742	743 744 754 756 758			RS1/8S182J
R	749	762 763 786 792 886 887			RS1/10S103J
R	750				RS1/10S562J
R	751	752			RS1/10S151J
R	755	757 759 795 797 798 799			RD1/4PS103JL
R	761	788 791 793 872			RS1/10S473J
R	766	768 770 785 871			RS1/10S104J
R	772	774			RS1/10S302J
R	778				RS1/10S752J
R	787	789 790 869 870			RS1/10S222J
R	859	860 863 864	Chip Resistor 4.7k Ω		CCN1023
R	861	862 865 866	Chip Resistor 10k Ω		CCN1025
R	867	868 964			RS1/10S102J
R	873	874 897 898	Chip Resistor 4.7k Ω		CCN1023
R	875	876 879 880	Chip Resistor 12k Ω		CCN1026
R	885				RS1/10S682J
R	892	893			RS1/10S0R0J
R	961				RS1/10S220J
R	1001	1002 1003			RD1/4PS103JL

CAPACITORS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	351	707 708 874 973			CEA101M6R3LS
C	352	355 505 513 520 521 522 523 525 526			CKSQYB103K50
C	353	654 657			CKSQYB333K25
C	354				CASA100M6R3

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	356				CKSQYB332K50
C	357	360 361 614 630 651 653 663 758			CKSYB224K25
C	358	503 510 511 528 607 665 675 677 757			CKSQYB473K25
C	370	373 627 877 878 879 880			CCSQCH220J50
C	371	509 615 858			CKSQYB102K50
C	372				CCSQCH150J50
C	451	452			CEA220M6R3LS
C	453	454			CEALNP4R7M35
C	455	456			CEA4R7M50LS
C	457	458 865 866 867 868 869 870 871 872			CCSCH330J50
C	459	460 851 852 863 864 967 968 969 976			CEA101M10LS
C	461	462 659 689 759 855 856			CEA100M25LS
C	463	970			CEA100M10LS2
C	501	502			CCSQCH270J50
C	504				CCSQSL561J50
C	506	621			CEALNP4R7M16
C	507				CSZSR47M20
C	512	853 854			CEA220M16LS
C	515	629 713 714			CKSQYB683K25
C	516	964 965 966			CEA470M16LS
C	517	518 605 612 620 656 701 702 705 764			CKSYB104K25
C	519	628 760			CKSQYB104K25
C	527	529			CCSQSL101J50
C	530				CSZSR33M35
C	533				CSZST4R7M35
C	534	611 625 626 652 662 676 678 709 710			CKSQYB103K50
C	535				CCCSL330J50
C	601	623 724			CKSQYB222K50
C	606	616 711 712			CEA220M10LS
C	608				CEALNP220M16
C	609	715			CKSQYB472K50
C	610				CCSQCH221J50
C	613				CKSQYB223K25
C	617				CEA4R7M35LS
C	618				CKSQYB272K50
C	655				CCSQSL681J50
C	661	666	220 μ F/10V		CCH1015
C	703	704			CCSQCH090D50
C	716				CKSQYB472K25
C	717	718 753 972			CCSQCH471J50
C	719	720			CKSQYB682K50
C	721				CEA330M10LS
C	751				CKSQYB103K50
C	752				CEA6R8M35LS
C	755	756			CCSQCH300J50
C	761	763 974 977 979			CKSQYB473K25
C	762	857			CKSQYB102K25
C	961		1000 μ F/16V		CCH1003
C	962				CEA010M50LS2
C	963				CEA0R1M50LS2
C	971				CKSYB104K25
C	978				CEA100M16LS2
C	980				CEA330M16LS

CD Tuner Unit	DEH-700SDK/WG	DEH-700/EW	DEH-600/EW
Symbol & No.	Part No.	Part No.	Part No.
IC502	KHA172	.....	.....
Q455	2SB709	.....	.....
Q514	2SC2712	.....	.....
D455	MA151WA-MN	.....	.....
D751 752 753	MA153-MC	MA153-MC	.....
D757 758 759	MA153-MC	MA153-MC	.....
D760	MA153-MC	MA153-MC	.....
X502	CSS1061	.....	.....
R472, 473	RS1/10S103J	.....	.....
R514	RS1/10S473J	.....	.....
R526	RS1/10S684J	.....	.....
R528	RS1/10S222J	.....	.....
R537	RS1/10S0R0J	.....	.....
R773	RS1/10S222J	RS1/10S122J	RS1/10S122J
R775	RS1/10S183J	RS1/10S183J	RS1/10S392J
C463	CEA100M10LS2	.....	.....
C512	CEA220M16LS	.....	.....
C513	CKSQYB103K50	.....	.....
C515	CKSQYB683K25	.....	.....
C516	CEA470M16LS	.....	.....
C529	CCSQSL101J50	CCSQSL221J50	CCSQSL221J50
C530	CSZSR33M35	.....	.....
C533	CSZST4R7M35	.....	.....

Unit Number :

Unit Name : FM/AM Tuner Unit (DEH-700SDK/WG)

MISCELLANEOUS

Mark	Symbol & No.	Part Name	Part No.
IC	51		PA4012
IC	201		PA4010
Q	1	Chip Transistor	2SB709
Q	2 203 205	Chip Transistor	DTC124EK
Q	51	Chip Transistor	DTA114TK
Q	101	Chip Transistor	2SD1819
Q	201		2SK435
Q	202	Chip Transistor	2SC2412K
D	201 204	Chip Diode	MA157-MR
D	205	Variable Capacitance Diode	SVC203-AB
L	1 51	Inductor	CTF1104
L	2	Inductor	CTF1086
L	101	Inductor	CTF1126
L	201	Inductor	CTF1084
L	203	Ferri-Inductor	LAU220K
L	204	Ferri-Inductor	LAU470K
L	205	Ferri-Inductor	LAU4R7K
L	206	Ferri-Inductor	CTF-157
T	51	Coil	CTE1021
T	52	Coil	CTE1022
T	201	Coil	CTB1020
T	202	Coil	CTB1004
T	203	Coil	CTB1040
T	204	Coil	CTE1037
T	205	Coil	CTE1038
T	206	Coil	CTE1039
CG	1	Surge Protector	DSP-201M
TH	51 102	Thermistor	DTN-T204D154K

Mark	Symbol & No.	Part Name	Part No.
CF	51 52	Ceramic Filter	CTF-182
CF	201	Ceramic Filter	CTF1041
CF	202	Filter	CTF1085
X	151	Ceramic Resonator	CSS1055
X	201	Crystal Resonator	CSS1014
VR	1	Semi-fixed 10k Ω (B)	VRTB4VS103
VR	51 101 102	Semi-fixed 33k Ω (B)	VRTB4VS333
		FM Front End	CWB1035

RESISTORS

Mark	Symbol & No.	Part Name	Part No.
R	2 7		RS1/10S223J
R	3		RS1/10S124J
R	4		RS1/10S682J
R	5 13 63		RS1/10S0R0J
R	6 59 101		RS1/10S331J
R	10		RS1/10S560J
R	54		RS1/10S472J
R	56 58 104		RS1/10S393J
R	57		RS1/10S562J
R	60		RS1/10S473J
R	61 105		RS1/10S332J
R	64		RS1/10S222J
R	102		RS1/10S822J
R	106		RS1/10S333J
R	107		RS1/10S102J
R	108		RS1/10S104J
R	111		RS1/10S123J
R	112		RS1/10S684J
R	151 152 153		RS1/10S222J
R	201		RS1/10S220J
R	202		RS1/10S681J
R	203 206 214		RS1/10S222J
R	204 213		RS1/10S473J
R	205 209		RS1/10S470J
R	207		RS1/10S822J
R	208 211 212		RS1/10S103J
R	210		RS1/10S682J
R	215		RS1/10S153J

CAPACITORS

Mark	Symbol & No.	Part Name	Part No.
C	1		CKSQYB102K50
C	2 3 104		CKSQYB103K50
C	4 51 59		CKSQYF473225
C	52 53		CKSQYB223K25
C	54		CCSQSL101J50
C	55		CKSQYB102K50
C	56		CKSQYF104725
C	57		CEA47M50LS2
C	58		CCSQCH060D50
C	60		CEALNP100M6R3
C	101		CKSQYB822K50
C	102		CKSQYB682K50
C	103		CKSQYB392K50
C	105		CEA2R2M50LS2
C	106		CEA220M6R3LS
C	107 108		CKSQYB222K50
C	110		CEA010M50LS2
C	111		CEA100M16LS2
C	112		CEA0R1M50LS2
C	151 152		CKSQYB273K25

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
C	153			CS2AR47M35L	
C	154 155 156			CEA3R3M50LS	
C	157			CEA101M10LS	
C	201 223 228			CKSQYB103K25	
C	202 212			CKSQYB332K50	
C	203 215 216 219 226			CKSQYF473225	
C	204 208 210			CKSQYB223K25	
C	205			CCSQCH220J50	
C	206 207			CCSQCH820J50	
C	211			CEA2R2M50LS2	
C	213			CCSQCH390J50	
C	218			CEALNP2R2M35	
C	220			CCSQCH430J50	
C	221			CCSQCH100D50	
C	222			CSZA010K35L	
C	224			CEA470M16LS	
C	225			CKSQYB333K25	
C	227			CEA4R7M35LS	
C	229			CEA470M16LS	
C	230			CEA220M16LS	

FM/AM Tuner Unit	DEH-700SDK/WG	DEH-700/EW DEH-600/EW	DEH-750/ES
Symbol & No.	Part No.	Part No.	Part No.
Q51	DTA114TK	.....	.....
L2	CTF1086	CTF1086	.....
L201	CTF1084	CTF1084	CTF1026
VR1	VRTB4VS103	VRTB4VS103	VRTB4VS103
R14	.....	.....	RS1/10S0R0J
R60	RS1/10S473J	.....	.....
R61	RS1/10S332J	RS1/10S332J	.....
R101	RS1/10S331J	RS1/10S331J	RS1/10S471J
R151, 152	RS1/10S222J	RS1/10S222J	RS1/10S152J
C101	CKSQYB822K50	CKSQYB822K50	CKSQYB392K50
C105, 211	CEA2R2M50LS2	CEA2R2M50LL	CEA2R2M50LL
C106	CEA220M6R3LS	CEA220M6R3LL	CEA220M6R3LL
C110	CEA010M50LS2	CEA010M50LL	CEA010M50LL
C111	CEA100M16LS2	CEA100M16LL	CEA100M16LL
C112	CEA0R1M50LS2	CEA0R1M50LL	CEA0R1M50LL
C151, 152	CKSQYB273K25	CKSQYB273K25	CKSQYB333K25
C154, 155, 156	CEA3R3M50LS	CEA3R3M50LL	CEA3R3M50LL
C218	CEALNP2R2M35	CEA2R2M35NPLL	CEA2R2M35NPLL
C224	CEA470M16LS	CEA470M16LL	CEA470M16LL
C230	CEA220M16LS	CEA220M16LL	CEA220M16LL

Unit Number :
Unit Name : FM/AM Tuner Unit (DEH-750/UC, DEH-80/US, DEH-650/UC)

MISCELLANEOUS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
IC	51			PA4012	
IC	201			PA4010	
Q	1		Chip Transistor	2SB709	
Q	2 203 205		Chip Transistor	DTC124EK	
Q	3		Chip Transistor	2SA1162K	
Q	101		Chip Transistor	2SD1819	
Q	201		Chip Transistor	2SK435	
Q	202		Chip Transistor	2SC2412K	
D	11 12		Chip Diode	1SV128A-BB	

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
D	201 204		Chip Diode	MA157-MR	
D	205		Variable Capacitance Diode	SVC203-AB	
L	1 51		Inductor	CTF1104	
L	11 12		Inductor	CTF1065	
L	101		Inductor	CTF1126	
L	201		Inductor	CTF1026	
L	203		Ferri-Inductor	LAU220K	
L	204		Ferri-Inductor	LAU470K	
L	205		Ferri-Inductor	LAU4R7K	
L	206		Ferri-Inductor	CTF-157	
T	51		Coil	CTE1021	
T	52		Coil	CTE1022	
T	201		Coil	CTB1020	
T	202		Coil	CTB1004	
T	203		Coil	CTB1040	
T	204		Coil	CTE1037	
T	205		Coil	CTE1038	
T	206		Coil	CTE1039	
CG	1		Surge Protector	DSP-201M	
TH	51 102		Thermister	DTN-T204D154K	
CF	51 52		Ceramic Filter	CTF-182	
CF	201		Ceramic Filter	CTF1041	
CF	202		Filter	CTF1085	
X	151		Ceramic Resonator	CSS1055	
X	201		Crystal Resonator	CSS1014	
VR	1		Semi-fixed 100kΩ (B)	VRTB4VS104	
VR	51 101 102		Semi-fixed 33kΩ (B) FM Front End	VRTB4VS333 CWB1035	

RESISTORS

Mark	====	Circuit Symbol & No.	====	Part Name	Part No.
R	2 7 9 58			RS1/10S223J	
R	3			RS1/10S683J	
R	4			RS1/10S682J	
R	5 10 14 63			RS1/10S0R0J	
R	6 8 59			RS1/10S331J	
R	11			RS1/10S104J	
R	12			RS1/10S470J	
R	54			RS1/10S472J	
R	56 104			RS1/10S393J	
R	57			RS1/10S562J	
R	64			RS1/10S222J	
R	101			RS1/10S471J	
R	102			RS1/10S822J	
R	105			RS1/10S332J	
R	106			RS1/10S333J	
R	107			RS1/10S102J	
R	108			RS1/10S104J	
R	111			RS1/10S123J	
R	112			RS1/10S684J	
R	151 152			RS1/10S152J	
R	153			RS1/10S222J	
R	201			RS1/10S220J	
R	202			RS1/10S681J	
R	203 206 214			RS1/10S222J	
R	204 213			RS1/10S473J	
R	205 209			RS1/10S470J	
R	207			RS1/10S822J	
R	208 211 212			RS1/10S103J	
R	210			RS1/10S682J	
R	215			RS1/10S153J	

CAPACITORS

Mark ===== Circuit Symbol & No. ==== Part Name Part No.

C 1	CKSQYB102K50
C 2 3 104	CKSQYB103K50
C 4 51 59	CKSQYF473Z25
C 11 12 13 14	CCSQCH220J50
C 15	CKSQYB223K25
C 52 53	CKSQYB223K25
C 54	CCSQSL101J50
C 55	CKSQYB102K50
C 56	CKSQYF104Z25
C 57	CEAR68M50LS2
C 58	CCSQCH060D50
C 60	CEALNP100M6R3
C 101	CKSQYB392K50
C 102	CKSQYB682K50
C 103	CKSQYB392K50
C 105	CEA2R2M50LL
C 106	CEA220M6R3LL
C 107 108	CKSQYB222K50
C 110	CEA010M50LL
C 111	CEA100M16LL
C 112	CEA0R1M50LL
C 151 152	CKSQYB563K25
C 153	CSZAR47M35L
C 154 155 156	CEA3R3M50LL
C 157	CEA101M10LS
C 201 223 228	CKSQYB103K25
C 202 212	CKSQYB332K50
C 203 215 216 219 226	CKSQYF473Z25
C 204 208 210	CKSQYB223K25
C 205	CCSQCH220J50
C 206 207	CCSQCH820J50
C 211	CEA2R2M50LL
C 213	CCSQCH390J50
C 218	CEA2R2M35NPLL
C 220	CCSQCH430J50
C 221	CCSQCH100D50
C 222	CSZA010K35L
C 224	CEA470M16LL
C 225	CKSQYB333K25
C 227	CEA4R7M35LS
C 229	CEA470M16LS
C 230	CEA220M16LL

Unit Number :

Unit Name : Amp Unit (DEH-750/UC, ES, DEH-650/UC, DEH-620/US)

Mark ===== Circuit Symbol & No. ==== Part Name Part No.

IC 551	AN7188K
D 951	5Z27
D 952 954 955 956	ERA15-02VH
D 957 959	ERC04-02FE3
R 551 552 553 554	RS1/8S2R2J
R 955 956	RS1/10S0R0J
R 957	RS1/10S223J
C 551 552 553 554	CQEA104J50
C 555	CEHAQ221M16
C 556	CEA330M16LS
C 557 558	CCSQCH102J50
C 951	CCG1006
C 952	CEHAQ102M16
C 953	CEHAQ222M16
C 954 955 956	CEA010M50LL

EMI Filter

Unit Number :

Unit Name : Amp Unit (DEH-700SDX/WG, DEH-700/EW, DEH-600/EW)

Mark ===== Circuit Symbol & No. ==== Part Name Part No.

IC 551	AN7188K
Q 953	2SB1238
Q 954	UN221D
D 951	5Z27
D 952 954 955 956	ERA15-02VH
D 957 959	ERC04-02FE3
R 551 552 553 554	RS1/8S2R2J
R 953	RS1/10S152J
R 954 957	RS1/10S223J
R 955	RS1/10S0R0J
C 551 552 553 554	CQEA104J50
C 555	CEHAQ221M16
C 556	CEA330M16LS
C 557 558	CCSQCH102J50
C 559	CKSQYB103K50
C 951	CCG1006
C 952	CEHAQ102M16
C 953	CEHAQ222M16
C 954 955 956	CEA010M50LL

EMI Filter

Unit Number :

Unit Name : Amp Unit (DEH-80/US)

Mark ===== Circuit Symbol & No. ==== Part Name Part No.

IC 551	AN7188K
D 951	5Z27
D 952 954 955 956	ERA15-02VH
D 958 960	ERC04-02FE3
R 551 552 553 554	RS1/8S2R2J
R 955 956	RS1/10S0R0J
R 957	RS1/10S223J
C 551 552 553 554	CQEA104J50
C 555	CEHAQ221M16
C 556	CEA330M16LS
C 557 558	CCSQCH102J50
C 951	CCG1006
C 952	CEHAQ102M16
C 953	CEHAQ222M16
C 954 955 956	CEA010M50LL

EMI Filter

FM/AM Tuner Unit	DEH-80/US DEH-750/UC DEH-650/UC	DEH-620/US
Symbol & No.	Part No.	Part No.
O3	2SA1162	.....
D11, 12	1SV128A-BB	.....
L11, 12	CTF1065	.....
VR1	VRTB4VS104	VRTB4VS103
R3	RS1/10S683J	RS1/10S124J
R8	RS1/10S331J	.....
R9	RS1/10S223J	.....
R11	RS1/10S104J	.....
R12	RS1/10S470J	.....
R13	.....	RS1/10S0R0J
C11-14	CCSQCH220J50	.....
C15	CKSQYF223Z50	.....

Unit Number :
Unit Name : Display Unit (DEH-750/UC, ES, DEH-80/US)

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
	IC 901		LC7582A
	D 901 902 903	Chip Diode	MA153-MC
	D 904	Chip Diode	MA151A-MA
	L 901	Ferri-Inductor	CTF-157
	IL 901 902 906	Lamp 14V 40mA	CEL1025
	IL 903 904 905 907 908	Lamp 14V 40mA	CEL-147
	SW 901 902 903 904 905 906 907 908 909 910	Switch	CSG-253
	SW 911 912 914 915 916 917 918	Switch	CSG-253
		LCD	CAW1074
	R 901 902 903		RD1/4PS103JL
	R 904 905		RS1/10S104J
	R 906 911 916		RS1/10S751J
	R 907 912 917		RS1/10S112J
	R 908 913 918		RS1/10S182J
	R 909 914 919		RS1/10S362J
	R 910 915 920		RS1/10S113J
	C 901		CEA470M6R3LS
	C 902		CKSQYB103K50
	C 903		CCSOCH301J50
	C 904		CKSYB224K25

Display Unit	DEH-80/US DEH-750/UC, ES	DEH-700SDX/WG DEH-700/EW	DEH-650/UC	DEH-620/US	DEH-600/EW
Symbol & No.	Part No.	Part No.	Part No.	Part No.	Part No.
D901, 902, 903	MA153-MC	MA153-MC	.....	.....	.....
D904	MA151A-MA	MA151A-MA	.....	.....	.....
D905	.....	.....	LN81RC5V	LN81RC5V	LN81RC5V
IL901, 902, 906	CEL1025	CEL1013	CEL1025	CEL1025	CEL1013
IL903, 904, 905	CEL-147	CEL-147	CEL-147	.....	CEL-147
IL907, 908	CEL-147	CEL-147	CEL-147	.....	CEL-147
SW913	.....	.....	CS01014	CS01014	CS01014
R921	.....	.....	RS1/10S681J	RS1/10S681J	RS1/10S681J

Unit Number :
Unit Name : Carriage P.C. Board

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
M 831		Motor Unit (Spring)	CXM1054
M 832		Motor Unit (Carriage)	CXA3347
S 831		Switch (Home)	CSN1018

Unit Number :
Unit Name : Mechanism P.C. Board

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
D 834 835 836 837		LED (Disc detect)	SLH-34VC3F
M 833		Motor Unit (Loading)	CXA2129
S 832		Switch (Disc set)	CSN1020

Unit Number :
Unit Name : Detector P.C. Board

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
Q 831 832 833 834		Photo-transistor	PH102

Miscellaneous Parts List

Mark	===== Circuit Symbol & No.	==== Part Name	Part No.
D 941 (DEH-700SDX/WG, 700/EW, 750/UC, ES, 80/US)		LED	LN81RC5V
SW 1 (DEH-700SDX/WG, 700/EW, 750/UC, ES, 80/US)		Switch	CSN1012
SW 941 (DEH-700SDX/WG, 700/EW, 750/UC, ES, 80/US)		Switch	CSG-253
R 941 (DEH-700SDX/WG, 700/EW, 750/UC, ES, 80/US)		PU Unit	RD1/4PS681JL
			CGY1015



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Service Manual

**SERVICE GUIDE
ORDER NO.
CRT 1161**

CD MECHANISM UNIT

CX-173

- This service manual is a description of the CD mechanism found in the model numbers listed in the table below.
- When performing repairs use this manual together with the specific manual for the model under repair.

Model	Service Manual
DEH-66/UC	CRT1166
DEH-66SDK/WG	
DEH-66/EW	
DEH-66/EI	

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1. DISASSEMBLY

• Disassembly of the Carriage Unit

Note: There may be times when the names of parts used in this manual are not the same as those used in the lists accompanying the Exploded View. If a different name is used here, the part name given in the Exploded View is also provided in parentheses ().

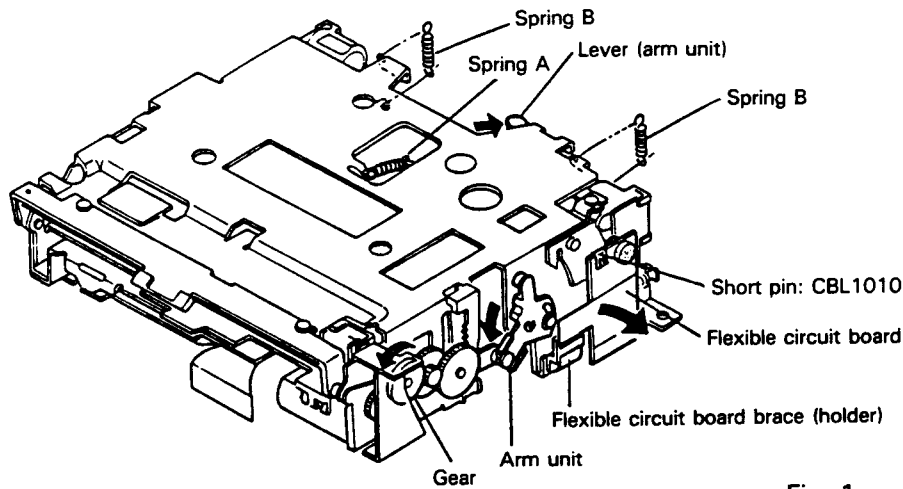


Fig. 1

1. Put the mechanism unit into a loading complete state. (Move the lever back and rotate the gear while pressing down lightly on the arm unit. Rotate the gear until the three carriage unit shafts are free and the unit is supported by the four damper units.
2. Remove Spring A and two Springs B.
3. Remove the flexible circuit board from the flexible circuit board brace.

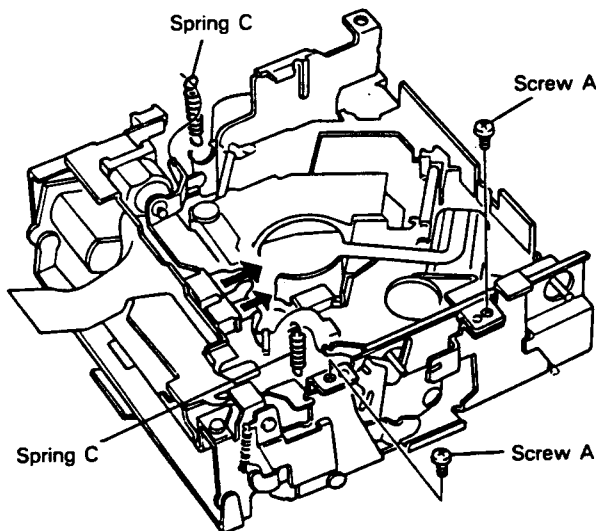


Fig. 2

4. Turn the mechanism unit upside down.
5. Remove the two Springs C.
6. Remove the two flexible circuit boards from their connectors.
7. Remove the two Screws A.

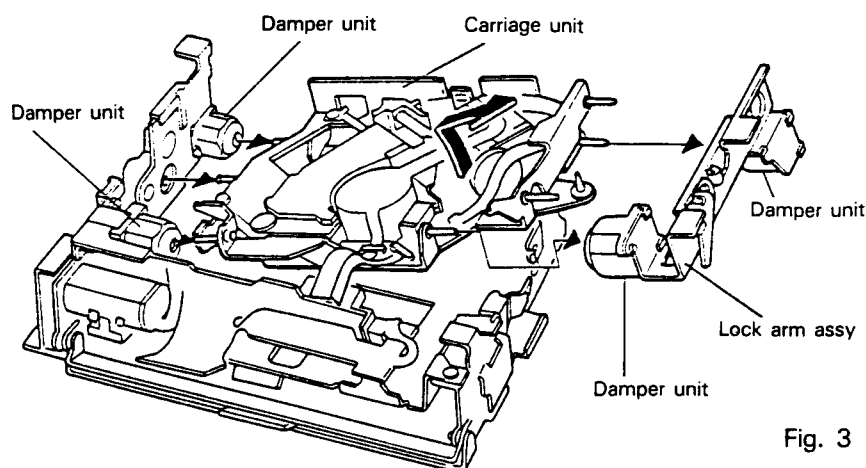


Fig. 3

8. Lift the lock arm assembly and then pull out the carriage unit.

9. Remove the carriage unit from the lock arm assembly.

Note: The damper units are lined with a thin rubber film. Be careful not to damage this when disassembling.

● Disassembly of the Carriage Motor Unit

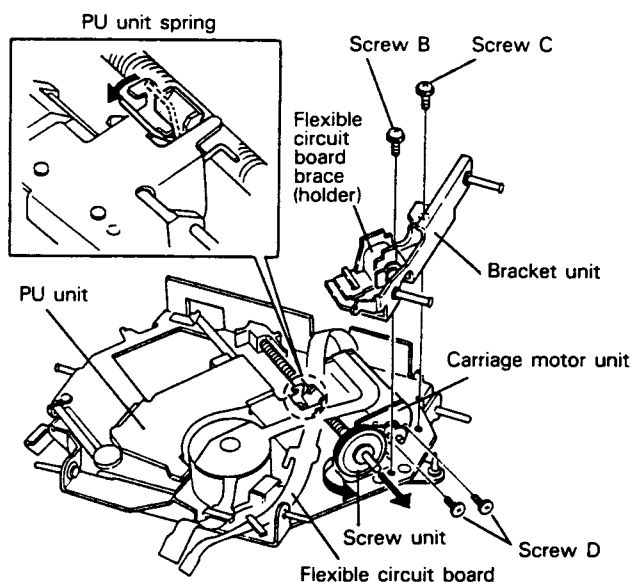


Fig. 4

1. After removing the Screw B and Screw C, remove the bracket unit. At this time remove the flexible circuit board from the flexible circuit board brace.
2. Remove the belt.
3. Cock the PU unit spring as shown in Fig. 4 and then move the PU unit to its outermost position. (Cocking the spring disengages the screw unit so that the PU unit can be moved by hand from above.)

4. Pull the screw unit out of the assembly.

5. Remove the two Screws D and then the carriage motor unit.

Note: When reinstalling the carriage motor unit, tighten Screw D and seal it.

● Disassembly of the PU Unit

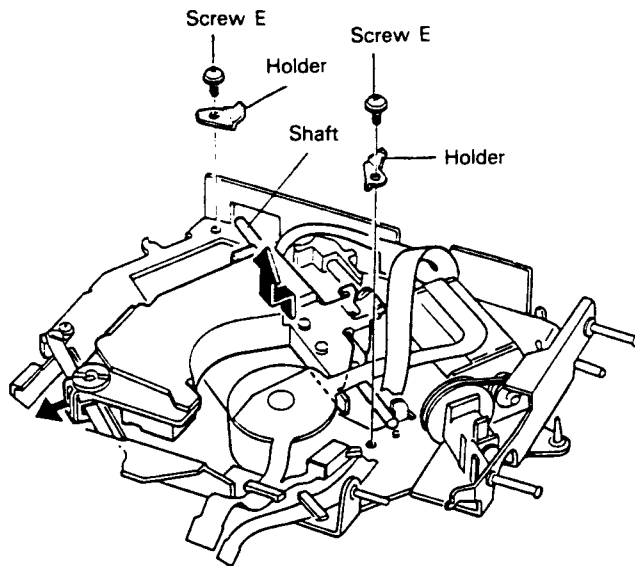


Fig. 5

1. Cock the PU unit spring as shown in Fig. 4. Move the PU unit to the center of the shaft for easy removal.
2. Remove the two Screws E and then the holders.
3. Remove the PU unit, lifting it from the shaft side where the holders have been removed and being careful not to catch the shaft on the opposite side.
4. Pull the shaft out of the PU unit.

● Disassembly of the Spindle Motor Unit

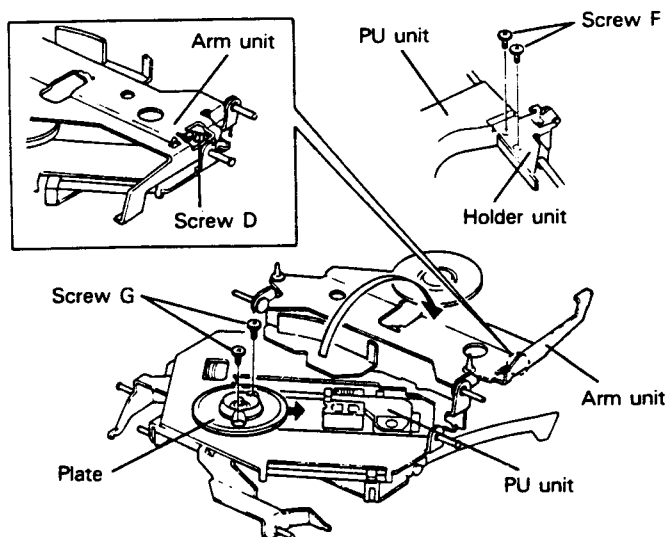


Fig. 6

1. Remove the two Screws F and then remove the holder unit from the PU unit.
2. Cock the PU unit spring as shown in Fig. 4 and move the PU unit to its outermost position.
3. Turn the whole carriage unit right side up.
4. Remove Screw D and turn the arm unit upside down.
5. Turn the spindle motor plate so that the holes on the plate are at the position of the screws underneath.
6. Remove the two Screws G.
Note: When reinstalling the spindle motor unit, tighten the Screws G and seal them.
7. Slide the spindle motor unit onto its side and remove it.

● Disassembly of the Loading Motor Unit

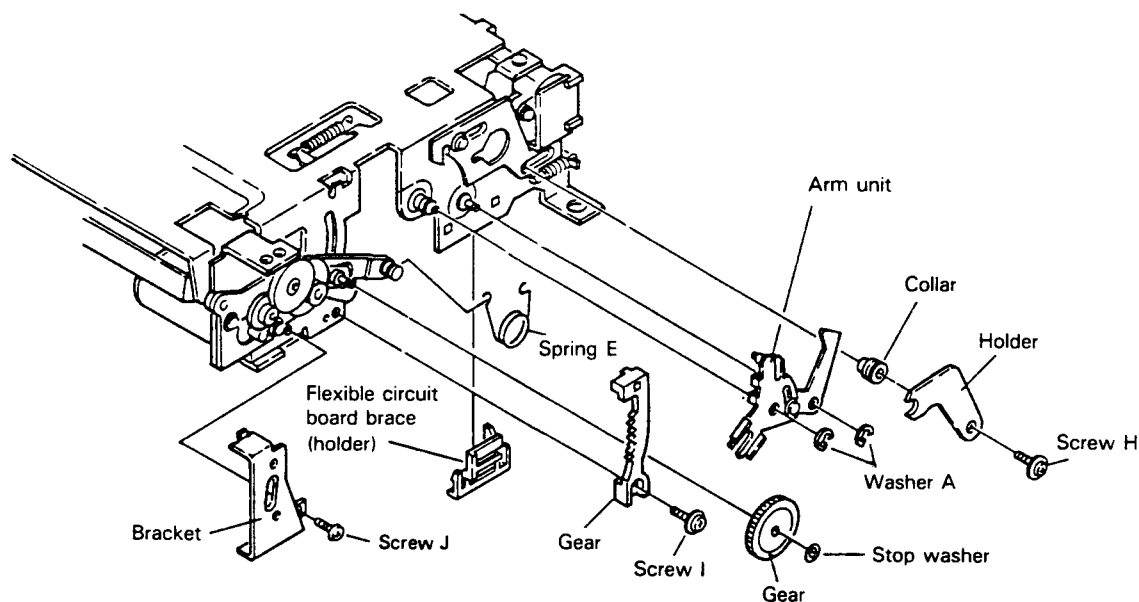
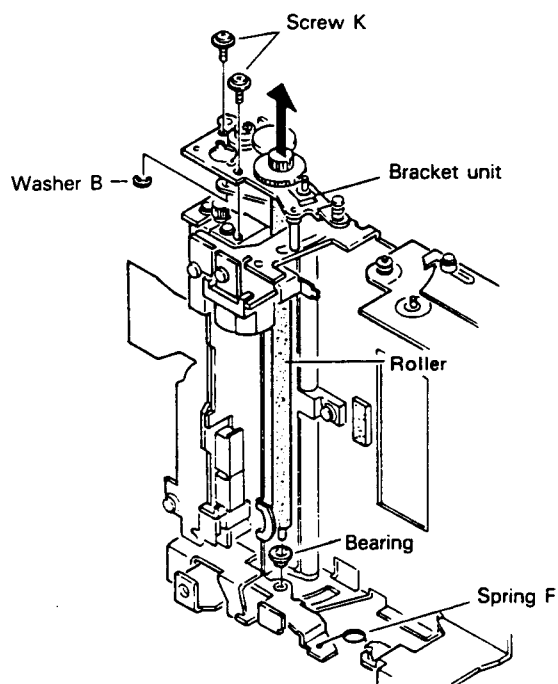


Fig. 7

1. Remove the carriage unit.
(Refer to the previous section entitled, "Disassembly of the Carriage Unit.")
2. Remove the flexible circuit board brace.
3. Remove Screw H and then the holder.
Note: When Screw H is removed, the collar will also come free. Be sure not to lose it.

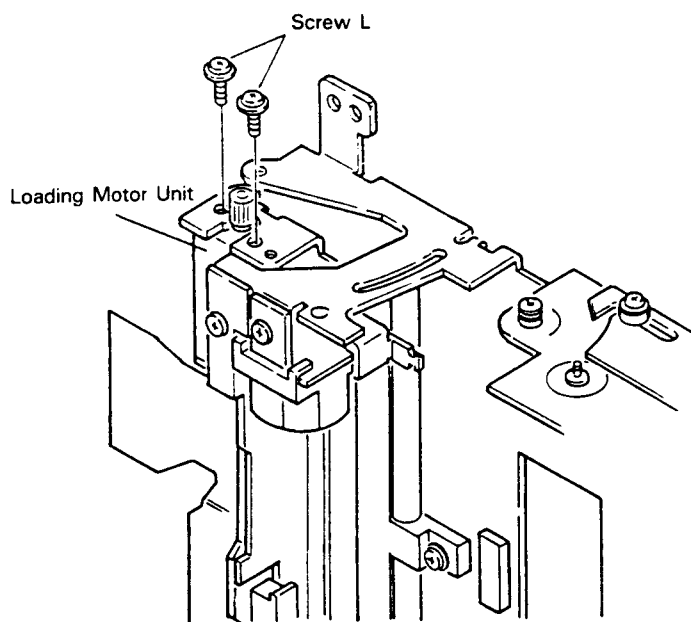
4. Remove the Screw E.
5. Remove the two Washers A and then the arm unit.
6. Remove the stop washer and then the gear.
7. Remove Screw I and then the gear.
8. Remove Screw J and then the bracket.



9. Remove Spring F.
10. Remove washer B.
11. Remove the two Screws K and then pull out the bracket unit.

Note: The bearing at the tip of the roller will also come loose. Be careful not to lose it.

Fig. 8



12. Remove the two Screws L and then the loading motor unit.

Fig. 9

2. MECHANISM DESCRIPTION

• Loading Operation

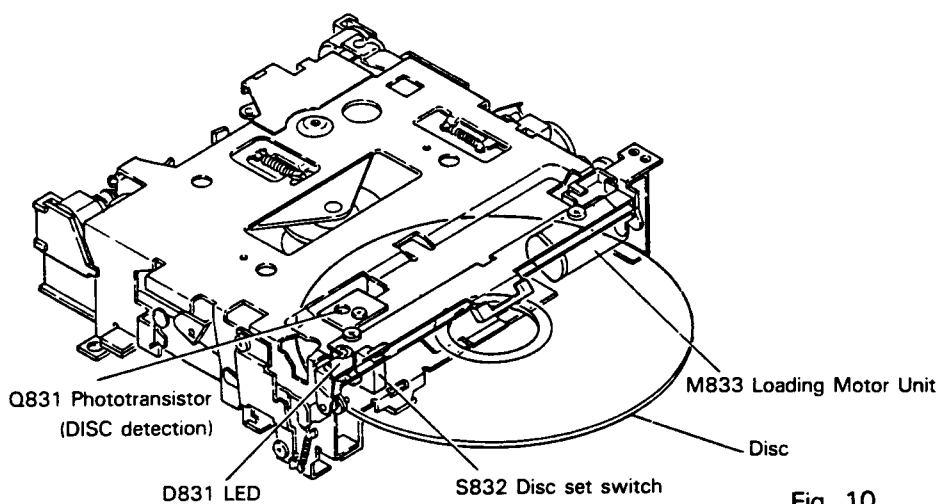


Fig. 10

1. When a disc is inserted into the unit, it enters between the LED and the phototransistor with the result that the light from the LED to the phototransistor is blocked.
2. When the phototransistor detects a disc presence in the unit, the loading motor begins to rotate and loading begins.
3. When the loading motor rotates, the roller is turned and the disc is moved into the unit. (Fig. 11)

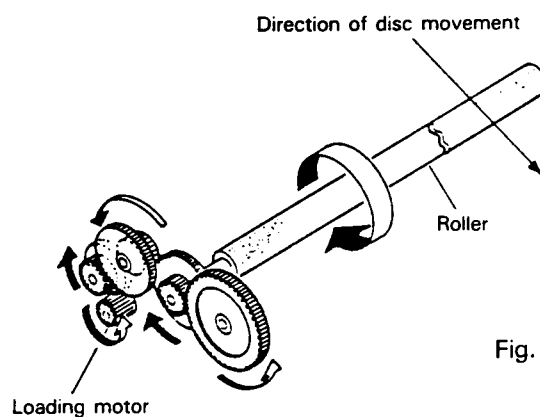


Fig. 11

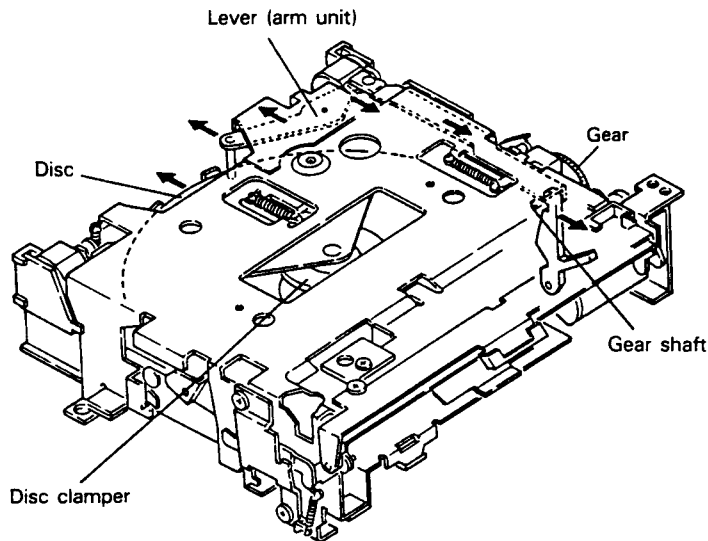


Fig. 12

4. When the disc pushes on the lever, the gear shaft lock is released. The gear meshes with another internal toothed gear and is lowered. (See Figs. 12, 13)
5. The action of the gear shaft moving down lowers the disc clamp and the disc is held in place.
6. As the gear is lowered when it meshes with the internal toothed gear, the gear unit also is lowered and the disc set switch is pressed.

7. At the same time, the disc door is lowered and the disc insert door is blocked to prevent the introduction of another disc.

The three shafts of the carriage unit are in a free mode and the carriage unit is in an anti-vibration mode supported by the four damper units. (Fig. 14)

When the disc set switch is turned on, loading motor rotation stops and the loading operation is complete.

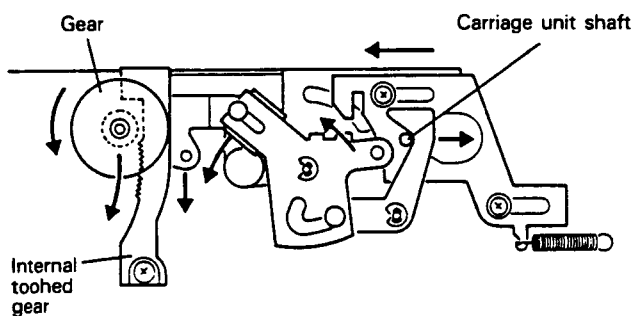


Fig. 13

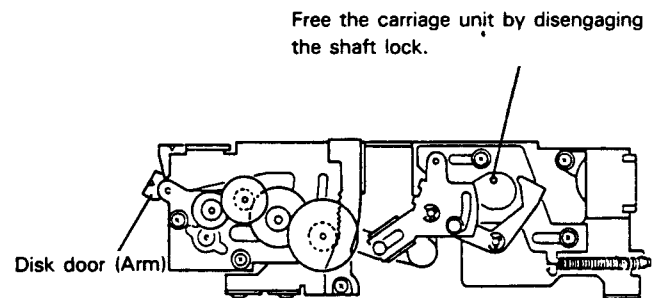
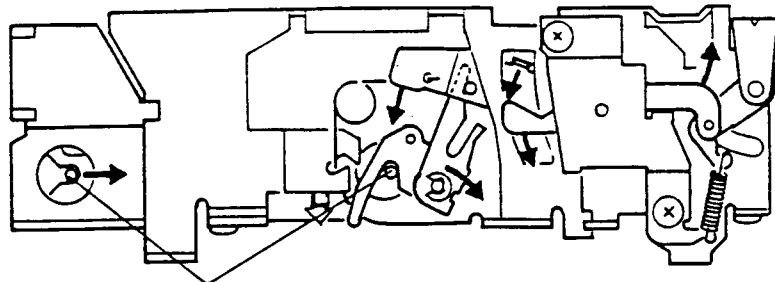


Fig. 14

(view of reverse side)



Free the carriage unit by disengaging the shaft lock.

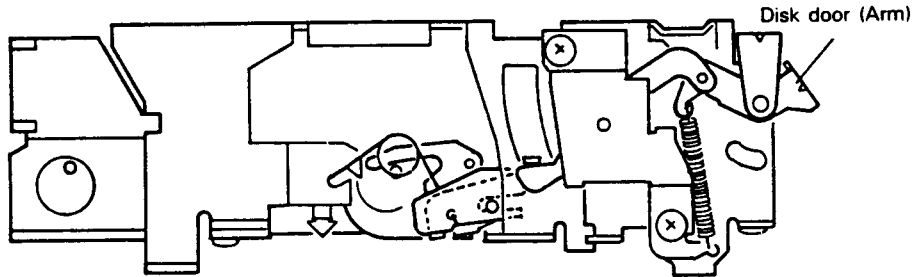
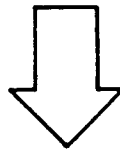


Fig. 15